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ORIGINAL LECTURES.

THE TREATMENT OF PNEUMONIA.

A Clinical Lecture delivered at the University Hospital.

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(*Specially reported for* THE MEDICAL NEWS.)

IN a simple uncomplicated case of pneumonia, the result of a single exposure to cold, we have the best chance to study the therapeutics of this interesting disease. If it be seen in the beginning, the line of treatment should be decided upon at once, for the final result of an attack depends largely upon its management during the first forty-eight hours.

The first effort must be directed toward limiting the area of lung structure which will pass into a state of inflammation; in fact, to limit the disease. This can be done to a certain extent. There is one point where the irritation will be greatest, and there will be found the greatest amount of damage. Around this centre are areas where the damage wrought grows less and less, the further we are from the centre of the inflammatory process. Now, we cannot abort the disease in the centre, but in the surrounding areas where the inflammatory process has not progressed to so great a degree, we may so modify the process as to secure resolution in these parts.

We must enforce absolute rest of the body, and warmth and protection of the surface. The patient must not be allowed to exert himself at all. He must use the bed-pan and urinal, and must be fed by his attendant. This conservation of force is a matter of the most vital importance.

The nerves and vessels of the affected area can be influenced by local depletion. Place wet cups over the seat of pain. This stimulates the vaso-motor nerves, and causes the vessels to contract, leaving less blood in the part. If the pulse be strong and bounding, arterial pressure greatly increased, intense throbbing headache, high temperature and hurried respiration, the end sought will be more certainly secured by venesection than by any other mode of depletion. In the first stage of such cases, general bleeding is useful; but the cases are so seldom seen in their incipiency, that it rarely happens that we can resort to this measure. Still, if a case occuring in a vigorous subject presents the features above named, I have no doubt that a moderate venesection will do good.

The diet should be very restricted. Injudicious feeding and premature stimulation are very grave defects in the treatment of the early stages of acute diseases. There certainly are times when concentrated nourishment and strong stimulation are needed. Early in the case, however, a simple diet of light broth, gruel or milk, is all that is necessary. There is no danger of a person dying of inanition in forty-eight or seventy-two hours; he has his own tissues to feed upon, and he can get along very well upon a light diet, and in the early stage of pneumonia especial care should be taken to see that the stomach be not overloaded.

When there is an excited pulse and great arterial tension, veratrum viride should be administered. It may be given in doses of three drops at short intervals —say of three hours. Its effect must be closely watched. Cooling diuretic and diaphoretic drinks may be used, and quinia should be given in the early stages. If the stomach is in good condition, it may be given by the mouth in doses of four grains every four hours. It is usually well borne, and tends to limit the extent of lung which will pass into consolidation. If the stomach is irritable, great care must be used to avoid exciting vomiting, and the quinia should be given by enema.

At the end of forty-eight or seventy-two hours the evidences of consolidation are revealed. The part consolidated must go through resolution, and this we must favor. A more nourishing diet is needed, and there must be no further depletion, unless the patient be very plethoric, and there is excessive venous congestion, labored condition of the heart, and excessive bronchial secretion. But if the remedies have been used properly in the first stage, depletion will usually not now be necessary. The veratrum may now be omitted, and the salts of ammonium, especially the muriate, should be used to favor resolution, in doses of eight grains every three hours, combined with a few drops of dilute muriatic acid; and quinia should be continued in doses of two or three grains every four hours.

During all this time, the chest should be surrounded with cotton, or kept enclosed in hot mush-poultices. The patient may now have beef-tea, alternating with milk. If there be marked debility, wine whey, or a small quantity of whiskey, should be administered.

Another type of pneumonia is where there is marked gastro-hepatic derangement, with prominent bilious symptoms—coated tongue, nausea, perhaps vomiting and looseness of the bowels, the fecal matter containing undigested food; headache, insomnia, sometimes delirium, and a tendency to pass into a condition of typhoid debility. Here depletion is not well borne. Dry cups may be placed over the liver and over the seat of the inflammation. Most careful attention should be given to the condition of the stomach. Veratrum viride will often cause vomiting, and in that case it must not be used, but tincture of aconite root should be substituted, in the dose of three or four drops every hour, until it affects the pulse. Calomel and an alkali should be given from the start, the best alkali being bicarbonate of sodium. One-sixth to one fourth of a grain of calomel, and three or four grains of the bicarbonate may be given every three hours, alternating with a dose of aconite. This should be continued until it affects the bowels, or until three to five grains of calomel have been taken. Quinia in such cases must be given by enema, or in the form of suppositories which, if properly made, are very effective.

Give whey, buttermilk, gruel, or champagne in tablespoonful doses. Treat the patient for catarrhal inflammation of the stomach and bowels as well as for the pneumonia. When the stomach is quieted and the tongue cleaning, resort to muriate of ammonium and muriatic acid.

These remarks apply to the common forms as seen in adults, but pneumonia in children presents some peculiarities as regards treatment. Quinia is well borne in comparatively very large doses; and stimulants are also well borne, and may be given at an early stage of the case. Veratrum viride should never be given to children. Give aconite in the first, and carbonate of ammonium in the second stage. I usually prefer carbonate of ammonium to the muriate in the pneumonias of

children, and especially when there are marked nervous symptoms.

In some cases stimulants are not needed until resolution is well advanced, and then only in small quantities. But there are cases where we are compelled to give them from the first, especially where there is marked nervous depression. Begin with very dilute stimulants. Opium is of great service; it may be called for in any stage, but it must always be given with great caution. Use the deodorized tincture, in combination with the muriate or carbonate of ammonium, when pain, nervousness, cough, sleeplessness, or looseness of the bowels are excessive. Do not forget that diarrhœa may readily be excited or maintained by the use of irritating remedies or injudicious articles of food when there is, at the same time, an irritable state of the bowels. When the stomach is irritable, opium may be given in suppository, along with quinia at night, quinia alone being given during the day. Ten to fifteen drops of the deodorized tincture may be given once or twice in the twenty-four hours, but if the cough is troublesome, it may be given in divided doses through the day, in combination with the salts of ammonium.

The complications of pneumonia are numerous, and require modifications of treatment, to all of which it is impossible I should now even allude. I am led, however, by the study of the case we have just seen to ask your careful attention to the importance of repeated examinations of the urine for albumen. This may be found as the result merely of congestion and increased blood pressure in the Malpighian tufts of the kidneys, and then it need not imply any great increase of danger. But when associated with the microscopic evidences of acute catarrhal nephritis, a complication by no means rare, the gravity of the case is much deepened. The same diet and the same stimulants and quinia may be used, but no blood should be drawn. Dry cups should be placed over the kidneys every day. Use repeated small doses of calomel and alkalies, and the infusion of digitalis as a diuretic. Continue this until enough calomel has been given, and then substitute muriate of ammonium and continue the digitalis. Convalescence must be watched much more suspiciously, and the patient should be compelled to remain in bed until all traces of albuminuria have disappeared. After the pneumonia has terminated by resolution, if this fortunate result occurs, the treatment suitable for subacute catarrhal nephritis may be instituted and continued.

ORIGINAL ARTICLES.

RESEARCHES ON THE EPITHELIUM OF THE CORNEA.[1]

BY ERIC E. SATTLER, M.D.,
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THE cornea and its epithelium have played for a long time one of the most important *rôles* in the history of microscopy, and still serve as excellent objects for experimentation and generalization. It has become, as it were, classic ground, and many results, most generally accepted now, date their origin from observations first made on these parts.

It was according to the original suggestion of v. Recklinghausen[1] that weak solutions of various salts of silver were first used for impregnating, and thus coloring, the tissues. The method, as everybody who has used it to any extent can testify, was attended with excellent results. The solid stick of nitrate of silver was employed much less frequently for the demonstration of the more delicate tissue-structures, notwithstanding the fact that for the first experiments on the cornea with silver, the solid stick was used. Coccius,[2] Stricker,[3] Eberth,[4] and others, have used the solid stick on the cornea for observing the process of inflammation as it takes place in that structure; nothing, however, has been published to my knowledge of its use in clearly demonstrating the structure of the epithelium, and it was for the purpose of comparing the two methods that I made a series of experiments, with the results as shown in the following communication. I found that the direct application of the solid stick possesses many advantages, with none of the disadvantages, of the weak solutions of silver salts, and for a clear demonstration of the epithelium, is to be preferred to the old method. The greatest number of experiments were made on the corneal epithelium of frogs and the epithelium of the skin of batrachians. The mode of procedure is as follows: After removing the membrana nictitans of a recently killed frog, the eye is slightly pressed from the orbit with the finger introduced into the jaw, and the solid stick freely applied to the surface of the cornea until it has assumed a milky appearance. The pure nitrate stick is greatly to be preferred to the mitigated. The upper part of the head, with the eyes still remaining in the orbits, is then removed from the rest of the body, and is exposed in slightly acidulated water (formic or acetic acid) to the direct rays of the sun. This latter procedure is not absolutely necessary; as good, if not better, results may be obtained by simple exposure of the head to the sun, without the addition of the acidulated water. As soon as the corneæ have assumed a brownish color, they are carefully excised in the usual way, spread out with glycerine under a cover-glass, and looked at with a high power. The stick of silver may also be used on the living frog in the same manner as above, and beautiful specimens sometimes obtained in this way. On sunny days, fifteen to thirty minutes are all that is required to complete the whole procedure. A somewhat longer time is required on cloudy days. I have in many cases made excellent preparations in the short space of ten minutes.

The intercellular cement substance remains clear and unchanged, while the protoplasm of the cells assumes a light or dark-brown color, according to

[1] This article will appear in German in the next number of the "Archiv für Microscopische Anatomie," and has now been translated by the author, with some alterations and additions. The experiments were made in the laboratory of Prof. Waldeyer, at Strassburg, Germany.

[1] V. Recklinghausen. Virchow's Arch. für Patholog. Anatomie. Bd. 19.

[2] Coccius. Uber der Ernährungsweise der Hornhaut und die Serum führenden Gefässe des menschlichen Körpers. Leipzig, 1852.

[3] Stricker, S., and Norris, W. Versuche über Hornhautenzündung. Studien aus dem Institute für experimentelle Pathologie in Wien. Bd. 1, 1870, p. 1.

[4] Eberth und Wadsworth. Die Regeneration des Hornhautepithels. Virchow's Archiv für patholog. Anatomie. Bd. 51, p. 361.

the intensity of the action of the silver on the tissue. The nucleus remains light, I might with propriety say white, with sharply defined outline. The nucleolus is colored in a similar manner as the protoplasm, somewhat lighter however. Sometimes the protoplasm assumes a peculiar bluish color, as if stained with hæmatoxylin. As will be seen, one of the great advantages of this method consists in the coloring and clear demonstration of all the parts of the epithelial cell, an advantage which weak solutions never possessed. It always required a second staining with some other fluid to show the nuclei and nucleoli.

What strikes our attention in the first place, in good preparations of this kind, is the sharply defined appearance of only one layer of epithelial cells, and that the most superficially situated one, its dark coloring preventing the appearance of the immediately underlying layers. It is on this account that morphological conditions can be studied with scientific accuracy, in a *single* layer and be separated from conditions found in deeper layers, a circumstance, too, which is of great advantage in estimating the number and size of cells in a given space, as will be shown later on. The dark coloring of the cells is also imparted to the peculiar connecting links, if I may so call them, between the cells, the so-called lines of Bizzozero, and these peculiar processes can be beautifully demonstrated in preparations made in this manner.

In the next place the form of the cells and nuclei claims attention. In the greatest number of cases, the outlines of the cells instead of being regular are irregular, due to peculiar projections or arms. The same feature may be noticed in many of the nuclei. These appearances give rise to an almost unmistakable impression and supposition that the cells, irritated by the application of the silver, had made amœboid movement, and had been fixed in one or the other phase of these movements. I know of no other method which demonstrates so clearly the amœboid movements of the cells and the nuclei as the direct application of the solid stick of nitrate of silver to the corneal epithelium. The nucleoli, also, stand out prominently, generally more than one being found in a nucleus. The minute structure (Kerngerüst), on the contrary, never becomes visible, therefore this method does not seem suitable for showing the "karyokinesis" taking place in the epithelial cells, yet nevertheless many interesting points can be arrived at also in this connection.

I come now to speak of the most important point, the division of the cell and nucleus, every stage of which process can be followed from beginning to end with the minutest accuracy and precision in the different specimens of the corneal epithelium obtained in this way. The peculiar karyokinetic figures, known by the Germans as "fadenknäuel," "sternfiguren," and "kernspindle," are, however, never met with. The nuclei always have the same appearances while division is taking place, as were figured by writers many years ago, *i. e.*, kidney or biscuit-shaped contracted nuclei, others only joined together by a thin thread, and finally cells with two distinct nuclei, the cells either unchanged, only increased in size, or also in a state of contraction and beginning division. I have seen several cells just on the point of division into two, each part of the cell with its distinct nucleus. Often the cells just at this stage were found in amœboid movement or violent contraction. Never, as I have remarked, do the peculiar well-known karyokinetic figures of Flemming appear, and it is surprising when we compare the always-occurring, sharply-defined figures of the division of the cell with the *stern* and *knäuel* figures made known to us by the indefatigable researches of Flemming, Strassburger, Magzel, and others, to find nothing whatever of these latter. If we seek to harmonize the results obtained by the application of the silver and those obtained by the method of staining by Flemming, only one hypothesis seems at all clear to me, viz., that the different appearance of the nuclei in the silver method is to be accounted for by the achromatic substance of Flemming. This substance is not brought out clearly by the staining method of Flemming, at least it disappears in contrast to the remarkable appearance presented by the chromatic constituents during the progress of the division of the cell. The silver method constantly shows the appearance of the entire nucleus with its chromatic and achromatic substance, which, however, cannot be distinguished from one another. We see, therefore, in accordance with the foregoing results, that the achromatic substance also shows amœboid movements during division, but in every other way takes part in this act in the simple way, as was formerly supposed. We must accordingly come to the conclusion, from the results obtained by Flemming and those by the method described in this paper, that the more fluid achromatic substance of the nucleus constantly surrounds the chromatic substance (or kernfäden) and divides in conjunction with this; and that, while the chromatin of the nucleus is successively passing through the various well-known changes of form and place, the achromatin divides in a simple manner, forming a sort of a hull around the chromatin figures. The proof for the correctness of this view would be furnished by preparations, in which, by some supplementary method of staining, the chromatic figures could be produced in the nuclei obtained by the silver method. I have tried this with various staining fluids at my command, but so far without success. Further investigations by other observers and other methods, however, might lead to some definite result, and experiments in this direction are certainly called for.

With the method detailed above, the nucleoli also show themselves, of somewhat lighter shade of brown than the protoplasm. The number found varied from one to four in one nucleus, two being probably the most constant. They varied in size, so that if two were present, one was generally smaller than the other. In accordance with the observations of Flemming, the nuclei were devoid of nucleoli as soon as division began. Again, I noticed in a great many cases evident budding and division of the nucleoli, as, for instance, nucleoli that were joined together by a thin thread only, and other forms pointing to the same thing. In

view of the present now generally accepted theory, that the nucleolus does not take part in the division of the nucleus and cell, I would like to call especial attention to these results, obtained by the silver method, agreeing as they do with theories formerly held, but in this age of rapid changes perhaps too eagerly thrown aside.

Here and there I came across an unmistakable triple division of a nucleus; that is, cells containing three distinct nuclei and nucleoli. I was able to follow the mode of division in various specimens, and shall, instead of a long description, illustrate it by the accompanying wood-cut.

Drawing showing the division of one nucleus into three.

Another peculiar advantage offered by my method of silver staining is the scientific exactness with which measurements can be made of the cells, for reasons given above. There can be no question of shrinkage of the cells. I compared the size of the cells with one nucleus with the size of those with two and three nuclei. The measurements were made with an ocular micrometer of Hartnack. The longest average diameter of those with one nucleus (result of twenty-five measurements)=0.0325 mm., shortest=0.0271 mm. Those with 2 nuclei (average of twenty-five measurements) were: longest=0.0487 mm., shortest=0.0398 mm. For two cells with each three nuclei, I found 0.072 : 0.042 mm., and 0.070 : 0.044 mm. respectively. A considerable increase in size is therefore noticed in those cells containing more than one nucleus in the various stages of division. To equal advantage we can employ this method in estimating the number of cells in division in comparison to those in a quiescent state. I know of no other method with which such accurate results in this line can be reached, for the reason that but one layer is visible, and hence cells of this layer and their outlines cannot be mistaken for those situated in deeper layers. For the cornea of the frog, after numerous countings, in the first layer of epithelium I found an almost constant ratio of 1 cell in division to 35 not so engaged. Very often I noticed a number of cells in division in close proximity, which, however, did not disturb the proportion.

In conclusion I would like to call attention to almost constantly occurring fine black lines, seemingly coming out of the intercellular cement substance, running over the protoplasm of the cell toward the nucleus, and suddenly disappearing from view as soon as they have taken their course a little beyond the edge of the nucleus. Distinct endings I have never been able to make out. Sometimes a line runs parallel to the outline of the nucleus, into which all these black lines seem to end. I have never been able to follow them to the nucleoli, as they always appear to take their end in the nucleus close to its edge. The number of these lines varies from two to ten. Often, too, the nuclei situated in a mother-cell were connected together in this way. These lines are not to be confounded with the fissures and cracks occurring in epithelial cells.

I should not like, without additional experimentation, to come to hasty conclusions, but the possibility that these lines may be *nerves* ending in the nuclei must at least be granted. I have tried, but without result, to verify these appearances with the various chloride of gold and other methods. The impregnation with the silver is so intense that an additional staining is out of the question. The appearance of the lines seems to depend on the degree of intensity with which the silver acts. Enough has been done by this little paper if it has called attention to some points still clouded by fog, and has stimulated others to continue investigations in this most interesting subject. In this way only is science advanced.

EXTENSION AS A SURGICAL REMEDY.

BY JULIUS A. POST, M.D.,
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To my respected teacher, Prof. Sayre, I am indebted for much that has proved of assistance in my surgical labors, and not only benefited me, and been the direct agent of relieving the sufferings of many of my patients, but of giving them sound limbs and useful members to help them along the rugged path of life. While at Bellevue Hospital, in the winter of 1865-66, my attention was directed to the method of extension by the wheel and pulley, and the various apparatus and appliances for producing extension at the hip, knee, and ankle; and from that time to the present I have never lost an opportunity for applying extension, and have never been disappointed in the results.

My experience has been a pleasant one, and I would urge every practitioner of medicine and surgery to thoroughly acquaint himself with the tried and most approved methods of extension, and having become familiar with their varied workings, never to let an opportunity pass without availing himself of its almost magic power.

Thousands of crooked limbs and anchylosed joints are to be found in every section of our land, and their owners go wandering about as living, moving monuments, and not only disgrace the man whose stupidity was instrumental in producing their deformities, but are everlasting reminders of the monumental status of the old time surgeon, and *prima facie* evidence that the workings of extension were to him unknown. I well remember two cases of acute traumatic synovitis of the knee-joint which came under my observation during my student life. These two men I meet quite frequently, and as I look at them and see their crooked legs and hobbling gait, I almost blush, and I feel a nervous tremor, which I can only interpret as an evidence of pity and charity, not only for the deformed subjects of incompetent treatment, but that so little is known of the benefits to be derived from the judicious employment of extension.

My note-book is replete with cases which I have carefully studied, and in evidence of the benefits to be derived from a thorough and systematic applica-

tion of this important remedy, I will draw on them for a few cases to illustrate something of its good work. Not long since I was consulted by a medical gentleman from a neighboring town, with reference to a case of anchylosis of the knee-joint, following acute synovial inflammation. This is my apology for the present paper, and will explain the earnestness in which I labor to bring this matter before those practitioners who do not have an opportunity to observe the methods employed in hospital practice, and are not familiar with the treatment of diseased joints by extension.

One of the most marked cases, and one which interested me very much, was that of Mrs. G. She came under my observation in the spring of 1868, and on my first visit I learned something of her sufferings, and gathered the following history from her husband. Two years previous she was suddenly taken with a severe pain in the hip-joint. The pain was continuous, and extended down the thigh to the ankle, but seemed more fixed at the knee. Never for a single moment was she free from pain. Two years of continual suffering had brought her to the bed, and reduced her from a plump, rosy womanhood, to a skeleton with barely enough flesh to cover her suffering frame. Unable to stand or sit for a single moment, obliged to call assistance every time she wished to move, with an hour of quiet sleep unknown for two long years, indeed, she was an object of pity. It is needless for me to state that her medical advisers had been numerous. All agreed that she was a victim of sciatica. She had been blistered and setoned and issued, and powdered and pilled and purged, had taken great quantities of guaiac and colchicum, and dosed with almost everything known to the regular or irregular professional world. She had lived, as she stated, for months on morphia; but in spite of all this the pain still continued. She was slowly wearing away, patiently waiting for the summons to come to join the unnumbered dead.

Before visiting the bedside I had satisfied myself that sciatica was out of the question. The father and mother, brothers and sisters, were all in excellent health; noted for their vigorous constitutions and physical development. As I passed into the room occupied by the invalid, I could see that she was fully prepared to receive my instructions as to pills and powders with true Christian resignation. I found that this so-called sciatica had developed soon after a fall on the back-door step. While she was occupied with other matters I stepped to the foot of the bed and gave her a slight tap on the heel, with such good effect that she bolted upright in bed, and sounded a key-note of alarm which brought the entire household about us in dismay. I explained my position, called for a couple of bricks and some cord, attached the cord to the foot, tied it to the bricks, swung the whole affair over a roller at the foot of the bed, and in less than ten minutes she was sound asleep; she slept four hours, awoke, took some beef tea, and for the first time in two long years was free from pain. We continued the pulley at night, and the extension hip-splint during the day. In two weeks she sat up, walked about the room, and has never required any treatment except beef tea, eggs, milk, and such nourishing diet as any good housewife can place before a hungry person. She is now well, weighs 138 pounds, and thanks God every day, that extension has taken her from her seeming death-bed, and changed her to a healthy vigorous woman. So much for a case of sub-acute inflammation of the hip-joint caused by a twist of the leg while going down stairs.

It has been my lot to meet with several cases of sub-acute articular rheumatism, which have yielded speedily and kindly to the wheel and pulley. I know of no remedy so grateful to a patient who has been a long sufferer from an articular inflammation, as extension. I believe it to be a powerful agent, and in the hands of an intelligent man, in this class of cases, is capable of doing a vast amount of good.

Mr. H., aged 24, came under my care in May, 1867, for a so-called sciatica. The trouble began soon after immoderate jumping. He was in the second stage of hip-joint disease. An incision about four inches long, in the upper-third and outer-aspect of the thigh, disclosed about a quart of hard, cheesy-looking material, firmly held by the strong fibrous fascia lata. From this cavity was a sinuous passage to the hip-joint, through which the finger readily passed. A number of little, honeycombed pieces of bone came away with the cheesy substance. The wheel and pulley at night, and the extension hip-splint during the day, gave him a useful leg, about an inch shorter than its fellow, but with good motion, strong, and amply sufficient for all the practical purposes of life.

I might relate quite a number of cases, all of special interest, and each one testifying to the efficiency of extension. I have treated four cases of traumatic inflammation of the knee-joint, always using extension, and always with good results. I have yet to meet with my first case of deformity, or anchylosis, and I never expect to meet with one so long as the inflamed surfaces are kept apart.

A. C. N., aged 18, was a patient of mine with acute traumatic inflammation of the knee-joint, caused by a cut puncturing the joint. Extension reduced the inflammation rapidly, and motion, under chloroform, gave him a good leg. To-day he is an upright example of the good results of extension.

I find that I have notes of eleven cases of inflammation involving the synovial tissue of the ankle-joint, all treated with the wheel and pulley, and ankle-joint extension. I never have allowed a joint to become anchylosed, and I never shall so long as I use extension and passive motion. Extension is the sheet-anchor in joint inflammations, and so long as it is properly used I have little fear of crooked limbs and stiff joints.

Extension, as applied to orthopædic surgery, is in its infancy. The day will surely come when operative procedures, other than extension, and gradually bringing the deformed member into a normal position, will be entirely abolished. Muscles and tendons have been cut and hacked, deformities have increased, and limbs have been made permanently useless by meddlesome tenotomy. Extension has

done, and will continue to do all that the most enthusiastic tenotomist could ask for.

Another long stride in the right direction is the almost entire discarding of iron braces, and apparatus full of joints and hinges, screws and bolts, for the treatment of spinal diseases. For the past twenty years the plaster jacket has been largely in use in the treatment of spinal curvatures and disease of the vertebræ, and with a proportion of good results never before realized. The principle involved is entirely and wholly that of extension, and the only question open for discussion, is how best to apply that important factor.

In a number of cases of spinal curvatures and diseases of the spinal vertebræ, which it has been my privilege to attempt to benefit, I have employed the extension pulley and plaster jacket, with or without the jury-mast, as the case would require, and I have never met with a single case where I have been disappointed in the result of the treatment by extension. Retention of the parts in proper position is a valuable and not-to-be-forgotten consideration, but the fixation of the body without the necessary extension would be worse than useless. The paralysis of children is often relieved by the application of extension and the plaster jacket, and the use of electricity and massage, combined with fresh air and sunlight, gives the little patient a better chance to overcome whatever of disease may have fastened upon it. Faulty nutrition is thus improved, and feeble children will develop into something of better flesh and blood if given the opportunity. Fractures of the lower extremities are often treated by simple extension, the retentive appliance being nothing but two bags of sand placed along the sides of the fractured limb. Excellent results are obtained by this method of treatment. I know of no fact more deserving of attention than the one that any disease of the joints where irritation and inflammation is the result of pressure, and where pain can be relieved by extension, that remedy, extension, should be employed; and further, I am satisfied that extension is one of the most important surgical remedies.

ROUND-CELLED SARCOMA OF PROSTATE GLAND.

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W. C., aged 35 years, was admitted to the University Hospital, on the evening of August 8th, suffering from retention of urine; numerous attempts had been made during the day to relieve the bladder by the use of a catheter, without success; the house surgeon after his admission also attempted to introduce a catheter, but finding that it went into a false passage, wisely desisted from further efforts.

When I saw the patient a short time after his admission, he was restless and complained of severe pain in the hypogastric region, the abdomen presented a smooth globular swelling which was dull on percussion and extended from the pubis almost to the umbilicus.

The patient stated that some years ago he had had gonorrhœa, which had been followed by a stricture, this had been relieved by the use of bougies, but for more than a year he had at times suffered from pain in passing his urine, which at no time was bloody; the present attack he said was the most persistent one from which he had ever suffered.

I first introduced a full-sized catheter into the urethra but as it approached the membranous portion of the canal, found that it slipped into a false passage; small flexible instruments were also tried without success.

On introducing my finger into the rectum I found that the prostate gland was very much enlarged. The patient was ordered a warm poultice to the abdomen, and given a suppository of belladonna and opium, to be repeated according to circumstances; in the course of an hour he was much more comfortable and had passed a few ounces of urine, and during the night passed small quantities of urine at intervals.

When seen on the following day the abdominal tumor was slightly less marked, the patient was comfortable, and was passing a fair amount of urine.

On August 13th, another attempt was made to introduce an instrument into the bladder, without success.

The patient did well until August 18th, when the abdominal tumor increased in size and he suffered from severe pain and retention of urine. The symptoms now becoming urgent, it was decided on consultation with Prof. Ashhurst, to etherize the patient and try to introduce an instrument through the urethra, and should this fail, to aspirate the bladder above the pubis, or to open the urethra through the perineum.

The patient being etherized, an unsuccessful attempt was made to introduce an instrument into the bladder; a medium sized aspirating canula was then introduced into the tumor through the abdominal walls, but no fluid was obtained except a small quantity of blood; in introducing the canula it was remarked that it gave the sensation of passing into a solid body, and after a careful examination it was evident that there was a solid tumor occupying the position of, or attached to the bladder.

It was now decided to open the urethra at the base of the bladder through the perineum, and the operation known as Cock's was selected, which consists in tapping the urethra through the perineum, with the finger introduced into the rectum and resting upon the apex of the prostate as a guide. This operation was accordingly done, and was followed by the escape of a small amount of urine, which caused some diminution in the size of the abdominal tumor and rendered its outlines and solid nature more observable. Through the rectum could be felt a smooth oval tumor behind the enlarged prostate, which was supposed to be the bulging posterior wall of the bladder.

The patient was put to bed and kept moderately under the influence of opium; he did well after the operation, and expressed himself much relieved, passing his water freely, and suffering only from an attack of dysentery, which was difficult to control, and was probably due to transmitted irritation. On

the ninth day after the operation, peritonitis suddenly developed, and caused a fatal termination of the case on the following day.

Autopsy (two hours after death).—Upon opening the abdomen, a large quantity of thick, yellowish-red, purulent fluid, having a urinous odor, was found bathing the intestines; recent lymph had been thrown out, and the coils of the intestines were everywhere bound together by adhesions, which were, however, easily separated.

The omentum was in places firmly adherent to the intestine, and contained numerous irregular nodulated masses, varying in size from that of a pea to that of a hen's egg. These masses on section presented a whitish-yellow color.

In the lower part of the abdominal cavity was a large, irregularly-shaped tumor, firmly adherent to the small intestines, omentum, colon, and pelvis.

After the separation of these adhesions, and the removal, by careful dissection, of the growth, it was found to originate from the prostate gland. On section, the tumor presented in parts the characteristics of scirrhus, in other parts those of encephaloid; in other places there were large irregular loculi, with reddened, irregular, friable walls, filled with fluid similar to the fluid found in the abdominal cavity, though no communication between these loculi and the abdominal cavity was found which might not have been made by the force necessarily used in separating the tumor from the intestines.

No trace of normal prostate gland or seminal vesicles could be discovered.

The bladder, containing a few ounces of urine, was found in front of the upper portion of the growth, its upper part almost on a line with the umbilicus.

The anterior wall of the bladder was perfectly normal; its posterior wall, resting on the tumor, was thickened, raised, red, and velvety, a condition caused apparently by the growth of numerous small villous masses in the epithelial lining, as the muscular coat did not seem to be infiltrated.

The ureters were normal and opened into the bladder in the normal position.

The urethra, as far as could be seen, ran along the anterior surface of the tumor, and was not involved by it.

The weight of the growth was five pounds and two ounces.

The kidneys, stomach, lungs, and intestines were normal; the capsule of the liver and spleen contained several secondary growths.

The brain and membranes were not examined.

Drs. G. E. de Schweinitz and W. E. Hughes, who made a microscopical examination of the tumor and the secondary growths, submit the following report:

MICROSCOPICAL EXAMINATION.—Portions from the primary growth, and also pieces from the secondary deposits in the omentum, liver, and mesenteric glands, were hardened in alcohol, sections were made, were stained with carmine, mounted in damar, and examined microscopically. The growth is a typical small round-celled sarcoma, as is shown by the uniform character of the cells, their embryonic structure, the wall-less bloodvessels, and the absence of any alveolar stroma. The secondary deposits repeat the structure of the original growth. In all the specimens the bloodvessels are numerous, being either simply vascular lamina, or else separated from the cells by a little fibrillated tissue. Many of them are filled with blood-clots. A faint, slightly granular, intercellular substance can be detected. In some specimens, here and there, old preëxistent connective tissue is seen. No prostatic structure is anywhere to be detected. The wall of the bladder, after preparation, exhibited the following characters: the epithelium of the mucous coat is proliferated and granular, the nuclei of the cells being not at all, or scarcely, distinguishable. The submucous fibrous tissue and the muscular walls are engorged with a small-celled infiltration.

Dr. Henry Formad, Assistant Demonstrator of Pathology in the University of Pennsylvania, who has examined the sections cut by these gentlemen, concurs in their opinion.

Malignant disease of the prostate gland is a rare affection; but its occurrence is probably not so exceptional as would be indicated by the statistical researches of M. Tanchon,[1] who found it present only in five instances out of 1,904 cases of males who had died of malignant disease. Sir Henry Thompson,[2] in commenting upon the above figures, states that he believes that they represent a much smaller than the true number, and bases his belief upon the errors which may have occurred, due to the source from which these figures were derived—from an ordinary register of deaths; and also, from the fact that encephaloid of the prostate gland rapidly involves the bladder, he thinks that many of the cases classed as vesical, may have had their origin in the prostate gland.

M. Jolly,[3] in a monograph upon this subject, mentions an aggregate of forty-one cases, which includes many of the cases collected by Thompson and Oscar Wyss, but the author himself thinks it is questionable whether some of the cases can properly be classed under the head of malignant disease.

Thompson reports eighteen cases of malignant disease of the prostate gland which he considers well authenticated.

Gross,[4] in speaking of tumors of the prostate, mentions cysts, fibromata, myomata, carcinomatous tumors, and sarcomata, but states that scirrhous, colloid, and melanotic tumors are unknown in this connection. Upon the question of scirrhus of the prostate, the latter authority differs from Thompson, who admits the existence of scirrhus of this organ, and states that he has himself seen one case, and knows of the existence of two others—one of them a case under the care of Mr. Adams, of the London Hospital.

Upon the question of colloid cancer of the prostate gland, the two authorities are agreed; but they differ as to the existence of melanotic cancer of this organ, for Thompson states that there are two cases of this affection on record.

[1] Thompson on Diseases of Prostate, p. 263.
[2] Op. cit., p. 264.
[3] Archives Générale de Médecine, 1869.
[4] Gross on Urinary Organs, p. 421.

A number of cases of malignant disease of the prostate gland can be found, which are reported as scirrhus, and these cases occur principally among the older writers; but this is explained by Jolly and Thompson by the fact that they based their diagnosis principally on the physical quality of hardness in the tumors, and did not rely on the more accurate and scientific test of a microscopical examination.

With reference to sarcomata of the prostate gland, Gross speaks of eight reported cases, and lays stress upon the fact that they occurred in infancy and early boyhood, and that the average age in the eight cases was only four years.

Socin[1] mentions a case of sarcoma of the prostate occurring in a man aged 51 years, who had been troubled with irritation of the bladder for more than a year, and had been compelled to use a catheter for five weeks previous to his death, which was caused by septicæmia; this case presents much similarity to that reported in this article.

A careful examination of the reported cases of malignant disease of the prostate will convince one that the encephaloid variety is the one most frequently met with, and I believe upon this point all observers are agreed. That childhood and old age are the periods of life in which it is most commonly found, is generally conceded, and Dr. Picard states that among children malignant disease involves the prostate more frequently than any other organ, the eye excepted.

Gross states that secondary deposits are found in ninety per cent. of all cases of this disease, but the extreme rarity of the involvement of the prostate itself, as a secondary affection, is also noted.

Spontaneous hemorrhage is also mentioned as a symptom of this affection, but is not as common as in carcinoma of the bladder, and is more apt to occur in the encephaloid than in the sarcomatous variety; indeed, it is said only to be observed in the sarcomatous tumors of the prostate after instrumental interference.

When the disease occurs in childhood, it runs a very rapid course, and generally terminates fatally in from three to nine months; whereas in adult and advanced age its duration varies from nine months to several years.

The treatment of malignant disease of the prostate is, of course, merely palliative. The pain and irritability referred to the bladder, must be relieved by full doses of opium, while retention of urine is to be treated by the cautious use of the catheter.

[1] Gazette Médicale de Paris, 1873, p. 410.

MEDICAL PROGRESS.

THE HYGIENIC, PHYSIOLOGICAL, AND THERAPEUTIC EFFECTS OF HIGH ALTITUDES.—DR. LOMBARD read a paper on this subject at the recent International Congress of Hygiene at Geneva, of which the following are the conclusions.

The insufficiency of oxygen in high altitudes may cause asphyxia if it is not combated by inhalation of oxygen; the *mal de montagne* is essentially caused by this diminution of oxygen. Respiration and circulation become more rapid as ascent is made above the sea level, while at the same time exhalation of carbonic acid is also augmented until an altitude of 1000 to 1500 metres is reached, when it commences to decrease. Above an altitude of 2000 metres, although respiration and circulation are accelerated, the insufficiency of oxygen tends to develop anæmia, although a temporary sojourn at such an altitude is stimulating to all the functions. The high altitudes exert a therapeutic and prophylactic influence on pulmonary phthisis. —*Gaz. Méd. de Paris*, September 30, 1882.

A NINETY-SIXTH PORRO-CÆSAREAN OPERATION.—DR. IGINIO TASINI, director and surgeon-in-chief of the Maggiore Hospital of Lodi, Italy, performed this operation in the said institution, on September 23, 1882. The woman was the subject of malacosteon, and her pelvis much deformed thereby. Both mother and child were saved. This is the 44th record of cure out of 96 cases. Italy numbers now 40 operations, with 17 women saved, or 42½ per cent. The whole percentage in the 96 cases, is $45\frac{8}{9}$ of the mothers, and $77\frac{1}{12}$ of the children.

RADICAL CURE OF HYDROCELE.—For this purpose, DR. LAMPUGNANI (*Gaz. Med. Lombardia*, 1882, No. 25), of the Pavia Hospital, employs with great success chloral hydrate dissolved in equal parts of warm distilled water, injecting, by means of Potain's capillary trocar, as a general rule, one or two grammes of chloral in children, four in the adult, and from that dose to eight grammes in the aged. The burning pain produced is allayed by cold applications; and if absorption has not become complete in eight or ten days, the injection, in a smaller dose, is repeated.—*Med. Times and Gazette*, October 21, 1882.

PERITONITIS IN NEWLY-BORN INFANTS.—DR. OSCAR SILVERMANN (*Deutsche Med. Zeit.*) writes that in newly-born infants two forms of peritonitis can be distinguished, a septic or acute, and a non-septic or chronic. The most frequent cause of the latter is syphilis. If the infants are not born dead, they show as symptoms, besides the aged and pinched expression of the face, prominent meteorism and ascites, enlargement of the spleen and liver, increased and shallow respiration, and cold extremities. A common result of this fatal peritonitis is atresia ani; less frequenlty stenosis and atresia of small intestines occur.

The post-mortem on the case here referred to, showed complete closure of the duodenum from the pyloric orifice to the opening of the ductus choledochus. The symptoms of a high-seated intestinal atresia, inflation of the abdomen to the navel, sinking in of the part below, distention of stomach, constant vomiting till death, and obstruction, were not present; but the abdominal distention being regular, the vomiting ceasing on the third day, passages of meconium and stools occurring, and tenderness of the abdomen also being present, the diagnosis of peritonitis was made.

The diagnosis of the septic form is easier, as it arises almost exclusively from infected navel wound. The symptoms are not, however, always constant even in this form, for vomiting and meteorism may be wanting, obstruction or diarrhœa present, and the exudation may sometimes not be felt on account of the meteorism.

The tenderness of the abdomen on pressure is not characteristic as it is also present in dyspepsia, colic, etc.; the pulse generally is frequent, but may be slow in weak newly-born infants, the temperature high, but may be subnormal. In the majority of cases there is jaundice, enlargement of the spleen, rapid emaciation and loss of body weight.—*Obstet. Gaz.*, October, 1882.

DETECTION OF BACILLI IN TUBERCULAR SPUTA.—DR. GIBBES explains the failure to detect bacilli in undoubted tubercular sputa as follows: in some cases, where a patient is seen, and it is desirable to test the sputum at once, a small quantity only can be obtained, and this with evident effort; in these cases, no bacilli will often be found. The secretion coughed up comes from the back of the throat. A case of this kind puzzled him for some time. He had previously found a large number of bacilli, but on two occasions could find none. He gave the patient a wide-mouthed bottle, and told her to use it the first thing in the morning. She brought it the next day filled with thick sputum, which was literally crammed with bacilli.—*British Medical Journal*, October 21, 1882.

OIL OF WINTERGREEN IN THE TREATMENT OF ACUTE RHEUMATISM.—DR. F. P. KINNICUTT draws the following conclusions from the results obtained in twelve cases of acute rheumatism, treated by oil of wintergreen.

1st. That in the oil of wintergreen we possess a most efficient salicylate in the treatment of acute rheumatism.

2d. That in its efficiency in controlling the pyrexia, the joint-pains, and the disease, it *at least* ranks with any of the salicyl compounds.

3d. That the best method of its administration is in frequently repeated doses, continued in diminished doses throughout the convalescence.

4th. That its use possesses the advantages of being unattended with the occasional toxic effects, the frequent gastric disturbance produced by the acid or its sodium salt, even when prepared from the oil of wintergreen; that its agreeable taste and finally its comparative cheapness are further recommendations in favor of its employment.—*Medical Record*, Nov. 4, 1882.

ECTROTIC TREATMENT OF VARIOLES IN SMALLPOX.—MR. M. D. MAKUNA draws the following conclusions in a paper in which he details his experience in the treatment of smallpox, in the Fulham Smallpox Hospital:

1. That ectrotics are useful only during the early stage of vesiculation.

2. That the cauterization by carbolic acid is the best of them all; but when a case has advanced in the vesicular stage some good might be done by cutting open the vesicles and applying a strong solution of carbolic acid.

3. That some good might be done by the caustic application of the nitrate of silver sticks to each vesicle after cutting them open, but the practice is attended with much pain and irritation.

4. That the practice of the exclusion of the ordinary daylight from the sick-rooms, especially at the expense of the ventilation must be condemned. (It does not prevent the process of germination, fermentation, or suppuration.)

5. That during the pustular stage our efforts ought to be solely directed to the evacuation of the contents of the varioles, relieve pain, and hasten the process of cicatrization.

6. That, during the convalescence, the less the irritants are used to remove the roughness and maculæ on the skin the better.—*Med. Press and Circular*, October 18, 1882.

DISCOLORATION OF THE SKIN BY TOPICAL APPLICATIONS OF PYROGALLIC ACID.—Every one knows that when pyrogallic acid ointment is applied to the skin, the epidermis becomes more or less discolored, according to the particular part of the body to which it was applied, the tint varying from black on the palms of the hands and soles of the feet, to light yellowish-brown on other parts of the body. The color, which is confined to the epidermis, as several cases where desquamation has taken place have conclusively shown, is caused by oxidation, the oxidizing agents, according to C. HUPIER (*Rép. de Pharm.*), being exceedingly numerous, the alkalies and the oxygen of the air playing the principal parts in the reaction.

The alkalies are to be sought for in the soap used to wash the patient's linen and person, more especially his hands. After having rubbed in the ointment, the patient generally has recourse to soap and water, in order to clean his hands, but he really increases the evil by oxidizing the pyrogallic acid absorbed by the pores of his palms. If he simply confined himself to washing his hands in warm water without soap and wiping them in a soft towel, the stain would be very much lighter. Another reason why the palms of the hands darken so considerably is the large number of sudatory glands that exist on these surfaces. Not only this, but the perspiration remaining alkaline until it is neutralized by the fatty acids secreted by the sebaceous follicles, it has an oxidizing action on the pyrogallic acid, there being no sebaceous follicles on the palms of the hands. Again, the epidermis being very thick on this part of the body, the color penetrates it to a greater depth. These last two remarks apply with equal force to the soles of the feet. Another reason why these parts become more strongly colored is that, pore for pore, a larger amount of perspiration is exuded.—*New Remedies*, November, 1882.

CASE OF CANCER OF THE VERMIFORM APPENDIX.—DR. BEGER reports a case of cancer of the vermiform appendix occurring in the clinic of Prof. Thiersch. The patient was a man aged 47, who had for three years suffered from a tumor in the right groin, which eventually suppurated and was opened by a free incision and a large quantity of pus removed. Although the general condition of the patient improved after the operation, a fistula with ulcerating edges remained. Microscopic examination proved the growth to be cancerous in nature, and from the glandular structure and freedom from symptoms of intestinal obstruction, it was concluded that the case was one of cancer of the vermiform appendix.

At the patient's request the cancerous appendix and a portion of the wall of the cæcum were excised under salicylic acid spray; death occurred in 36 hours.—*Berliner klin. Woch.*, October 9, 1882.

DIAGNOSIS OF FŒTAL MONSTROSITIES.—According to PROF. G. CALDERINI (*Deutsche Med. Zeit.*), there are no positive points for diagnosis of a malformed fœtus ante partum. It is, however, a point of great practical value as it would frequently change our entire method of delivery, if the viability or non-viability could be determined ante partum. The author calls attention to the following points, which should awake suspicion and direct our attention to the possibility of an existing malformation. He refers to the presence of an excessive quantity of liquor amnii. In three successive cases, he found such relationship existing between fœtal malformation and excessive liquor amnii. He supports his theory on the origin of the liquor amnii, for as it is supposed to mostly originate from the kidneys of the fœtus, an increased pressure in them must necessarily increase the waters. To prove this point changes in the vessels or heart must be shown to exist. In three cases out of four the writer found good grounds for the disturbed circulation, in the presence of only one umbilical vessel, a lengthening of the heart, pathological curvature of the spine, etc.

He hoped these remarks would lead to further ob-

servation of the relation existing between hydramnios and fœtal malformation.—*Obstet. Gaz.*, October, 1882.

CEREBRAL TUMOR AND UNILATERAL DEAFNESS.—STRUMPELL (*Neurolog. Centralbl.*, August 15, 1882) records a case of tumor of the right hemisphere, in which along with the general symptoms of cerebral tumor, and left hemiplegia with some degree of anæsthesia, deafness developed in the left ear, with a total inability to localize the origin of sounds.

After death a tumor was found of the size of an apple, situated in the middle of the ascending parietal convolution. Round the tumor the cerebral tissue was in a state of white softening, which extended forwards as far as the fissure of Rolando, backwards throughout the parietal lobe, and beneath almost into the central ganglia.

He is of the opinion that the deafness was probably due to lesion of the parietal lobe; and that the localization of sounds in space is a function of binauricular hearing.—*Brain*, October, 1882.

THE USE OF CARBONATE OF AMMONIUM SACHETS FOR BRONCHITIS.—M. MELSENS having observed the good effects of the atmosphere of a stable on those suffering from pulmonary diseases, which are rightly attributed to the emanations of carbonate of ammonium, he thought that continued, yet moderate, respiration of this salt might be useful in other affections of the respiratory organs. After a serious attack of bronchitis, he decided on trying on himself the effects of carrying a little bag round his neck containing little pieces of carbonate of ammonium. From the first day the amelioration was felt, and the cough soon disappeared entirely, while often persons who suffered from chronic bronchitis also obtained relief. The use of little bags of carbonate of ammonium are intended to produce the same result as the air of a stable or a gasworks.—*Med. Press and Circular*, October 18, 1882.

ANÆSTHESIA OF THE LARYNX PRODUCED BY CARBONIC ACID.—At a recent meeting of the Académie des Sciences, M. BROWN-SÉQUARD announced that some experiments had led him to believe that the sensibility of the pharyngeal and laryngeal mucous membrane might be so annulled by a stream of carbonic acid gas or chloroform, as to permit of the introduction of a laryngeal sound without causing any disagreable sensations. His experiments have as yet been confined to animals, but as he proved as long ago as 1871 that a stream of carbonic acid might be directed into the pharynx without danger, it is possible that this method may become of use in laryngeal therapeutics. He promises to publish the results of the experiments with this object in view with which he is now engaged.—*Gaz. Hebdom. de Méd. et de Chirurg.*, October 6, 1882.

REGIONAL DIAGNOSIS AND TREPHINING.—WERNICKE and HAHN (*Virch. Archiv*, February, 1882) report a case of tubercular abscess of the left occipital region diagnosed from the symptoms, which were right hemiopia, proceeding to motor and sensory paralysis of the limbs on the right side. The skull was trephined (under antiseptic precautions) at the upper posterior angle of the left parietal bone, the dura and cortex incised and an abscess evacuated. The abscess was about the size of a hen's egg, and about three teaspoonfuls of pus were removed from it. The symptoms of paralysis and the general condition were at first greatly improved, but again returned before death, which took place a fortnight after the operation. The post-mortem examination showed a tubercular abscess in the left parietal and occipital region which had recently opened into the lateral ventricle. There were a few smaller softened tubercles in the neighborhood of the abscess. There were a few scattered patches of chronic tubercular pneumonia. The unsuccessful result was attributed to the unusual character of the abscess, and the absence of any capsule preventing the further extension and perforation into the ventricle.—*Brain*, October, 1882.

TWO NOVEL USES FOR PEPSIN.—DR. HOLLMANN (*Nederland Weekblatt*, 18, p. 272) has used an aqueous solution of sixteen grains of pepsin as an injection into the bladder of a patient who had hæmaturia, and in whom a catheter failed to empty the bladder. A few hours later, a dark, viscid, fetid fluid readily escaped through the catheter.

Dr. Ed. Rosenthal has used an acidulated and concentrated solution of pepsin as a local, hourly application to diphtheritic exudations of grave character, and reports that it caused rapid solution of the membrane.

The solution was made with a drachm of Jensen's pepsin, twenty drops of chemically pure hydrochloric acid, in enough water to make a fluidounce.—*New Remedies*, November, 1882.

TABES DORSALIS IN INFANCY.—DR. LEUBUSCHER reports the case of a boy, aged three and a half years, who came under his care after having been unable to walk properly for six weeks; the difficulty being exaggerated when attempts at walking were made in the dark or with the eyes closed. There was some incoordination in the movements of the upper extremity and some defect of speech which appeared at about the same time that the difficulty in walking had been noticed. The knee and ankle reflex were absent, sensation appeared to be undisturbed, and no disease could be detected in any other organs. Marked improvement in the condition of the lower extremities took place under the use of the galvanic current, but speech and the condition of the arms remained unchanged. The question naturally arises whether this was an undoubted case of ataxia, the family history throwing no light on the case, or whether it was of diphtheritic origin, or evidences of the existence of a brain tumor; the author does not attempt to decide these points with positiveness.—*Berliner klin. Woch.*, No. 39, 1882.

SALICYLIC ACID AS AN ANTIPUTRESCENT.—The plan has been widely advocated of employing salicylic acid as a means of preventing decomposition in various forms of food. A committee recently appointed by the Académie de Médecine have been investigating the subject and publish their conclusions in the *Journal de Médecine de Paris* for October 14th. They declare that salicylic acid in quantities sufficient to prevent putrefaction cannot be regarded as anything but a poison, and all foods so contaminated should not be allowed to be sold.

TROPHIC TROUBLES IN NERVOUS DISEASES.—DR. POUGET gives the following *résumé* of his opinions as to the mode of production of certain trophic changes in nervous diseases, especially in locomotor ataxia. Falling of the nails occurs in locomotor ataxia without the existence of any traumatic cause; as a true trophic change it may occur in any stage of the disease and be accompanied by vaso-motor disturbances. The falling of the nail is generally preceded by an ecchymosis beneath the nail, but is unaccompanied by any pain, and, although the nail is rapidly reproduced, it is as rapidly lost again. This falling of the nail does not appear to be intimately connected with the shooting pains, the anæsthesia, or any special symptom of nervous disease.—*Rev. de Thérapeutique Méd. Chir.*, Oct. 15, 1882.

INTESTINAL MOVEMENTS IN DIARRHŒA.—Fifteen years have passed since Traube lamented that we had no definite experimental knowledge of the character of the intestinal movements in diarrhœa, and the recent series of experiments by PROFESSOR NOTHNAGEL, constitute the first attempt to supply the information. It is commonly assumed that during diarrhœa the peristaltic movements are increased in energy, and more constant than in normal circumstances. The experiments of Nothnagel were made upon the colon, as well as on the small intestine. The production of a moderate degree of inflammation proved a more difficult task than he had anticipated. The most suitable agent was a concentrated solution of chloride of sodium. Five c. c. of this were injected into the rectum several times in the course of twenty-four hours, the return from the anus being prevented. The movements of the bowel were observed the next day in the usual salt bath. Nothnagel, however, never succeeded in exciting inflammation in a larger tract than from thirty to sixty centimetres, and the enteritis was always slight in the upper, and considerable, and often hemorrhagic, in the lower part. The production of inflammation in the small intestine was much more difficult. Attempts to produce it by injecting irritant substances into the stomach by means of an œsophageal sound, and thus to imitate an occasional cause in man, were unsuccessful. Even sulphate of copper failed. Strong solutions caused rapid death, and weak solutions had no effect. Only local inflammation could be produced by the injection of a concentrated solution of chloride of sodium through the wall of a loop of the small intestine, withdrawn from the abdomen for the purpose through a small incision.

In both large and small intestine the peristaltic movements were rapidly increased by the inflammation, and the affected portion became filled with fluid, manifestly inflammatory exudation. The peristaltic contractions took the form partly of oscillatory movements, and partly of circular constrictions. Sometimes, however, the affected portion became the seat of a prolonged tonic contraction, which involved both the transverse and longitudinal muscular fibres. Very different, however, was the condition when twenty-four or forty-eight hours were allowed to elapse after the injection. The inflamed and empty section of the bowel was motionless, no contraction could be seen in it as long as the experiment lasted, and this even when the inflammation which had been excited was slight in degree. The conclusion therefore is that the early stage of inflammation is attended with very strong contractions in the inflamed portion, but that when the initial period is over and the inflamed part of the bowel is empty, the movement is not greater than in the normal bowel. Moreover, it appears that the contents of the bowel are, in the early stage, moved through the inflamed portion with increased rapidity.

In the course of his experiments Nothnagel had many opportunities of observing the occurrence of intussusception, which frequently resulted from a vigorous peristalsis in the uninjured intestine. The invagination always occurred from above downwards, a strongly contracted portion passing into a part in which the contraction was slighter, or which was at rest. The length of the intussusception was always slight—from half a centimetre to two centimetres. It usually quickly ceased, in consequence of the cessation of the contraction; and only once did it last as long as ten minutes. It is a frequent occurrence in the small intestine, but is comparatively rare in the colon. On one occasion an invagination of the colon was distinctly removed by the antiperistaltic contractions which were set up by an injection of chloride of sodium into the rectum.

Another subject investigated by Nothnagel is the influence of morphia on the intestinal movements. It will be remembered that he discovered in his earliest experiments that a sodic salt placed in contact with the outer surface of the intestine of a rabbit causes a local contraction which passes upwards. This effect was found to be prevented by a preceding subcutaneous injection of a small quantity of morphia, one to four centigrammes. Even bicarbonate of sodium, which under normal circumstances causes a very energetic contraction, no longer produces the effect. Nothnagel ascribes the effect to the stimulation of a nervous mechanism antagonistic to that which is excited by the sodic salt. If, however, a much larger quantity of morphia was injected—ten centigrammes, for instance—not only does the sodic salt produce its customary effect, but the constriction is much more energetic than under ordinary circumstances. This anomalous effect seems to indicate that, while small doses of morphia stimulate, larger doses paralyze the inhibitory nervous mechanism. Morphia appears thus to exert on the intestinal apparatus an action comparable to that which digitalis exercises on the innervation of the heart, which consists in a stimulation or paralysis of the inhibitory fibres of the vagus, according to the dose employed. Other experiments seem to show that the action of morphia on the intestine is exerted through the splanchnic nerves. The constipation produced by morphia is assumed to be the result of a stimulation of the inhibitory fibres contained in the nervous trunk, aided by a diminution in the intestinal secretion.—*Lancet*, October 21, 1882.

PATHOLOGY OF ADDISON'S DISEASE.—PROF. SEMMOLA regards Addison's disease as an affection of the central nervous system, the lesions of the suprarenal capsule being only manifestations of trophic changes. Prof. Semmola has recently published a memoir, in which he figures the actual histological changes observed in the spinal cord. These are, 1st, myxomatous degeneration of the stroma in certain points in the ganglionic centres and in the cœliac axis; and, 2d, œdematous infiltration of the tissues in the neighborhood of the medullary canal. The functions of the sympathetic are also disturbed, and, as a consequence, there are digestive diseases, fever, general disturbance of nutrition, and local changes in the skin. Prof. Semmola reports a case which is said to confirm his views as to the pathology of this disease, which was greatly benefited by prolonged galvanization of the sympathetic nerve by means of constant currents.—*Journ. de Méd. de Paris*, Oct. 14, 1882.

LIGATION OF PEDICLE AROUND DRAINAGE-TUBE IN EXTIRPATION OF THE WOMB.—DR. J. M. F. GASTON recommends the ligation of the pedicle around a metallic tube passed within the canal, through the cervix, or in the upper part of the vagina, when complete extirpation is requisite. It is claimed that the adoption of this process would have the following advantages:

1. Security against hemorrhage, primary or secondary, by the constriction of the tissues around the tube.
2. Efficient drainage and disinfection of the cavity.
3. Prevention of subsequent irritation by the removal of all ligatures before completing the cure of the case.
4. Maintaining the pedicle in its natural relation without any tension upon adjoining parts.
5. Closure of external incision by first intention, with the least possible delay.
6. Obviating the ordinary tendency to septicæmia.—*Medical and Surgical Reporter*, November 4, 1882.

INTESTINAL ORIGIN OF ALKALOIDS.—M. CH. BOUCHARD explains the presence of alkaloids in normal urine

by assuming that the alkaloids are formed in the intestine, absorbed by the bloodvessels, and eliminated by the urine. In support of this theory he states that fecal matter both in health and disease contains alkaloids in much larger quantity than he has been able to detect in the urine. He believes that the quantity of these alkaloids depends upon the activity of intestinal fermentations. The urinary alkaloids have the same chemical properties as those found in the feces, and their quantity varies with the amounts present in the intestinal contents.—*Rev. de Méd.*, Oct. 10, 1882.

MECHANICAL STIMULATION OF THE BRAIN.—Various opinions have been expressed regarding the degree to which the cortex cerebri is excitable by mechanical agencies. Few experimenters have found the mechanical excitability to be well marked. The most noteworthy results thus obtained are those of M. Couty, who described movements as produced by such stimulation of the motor region, the effect closely resembling that following electrical stimulation. He stated, also, that these movements could be increased by causing inflammation in the cortex, either by exposing it to the air for a certain time, or by the action of various irritant substances. The nervous tissue becomes a little more consistent in consequence of the inflammation, and is less easily reduced to a soft pulp by mechanical disturbance. The effects obtained by M. Couty were of two orders: movements first on the opposite side of the body; and, secondly, on the same side as the hemisphere irritated, and in certain cases movements more or less general were produced. The first of these alone are comparable to the results of electrical stimulation of the motor zone, the others must be regarded as of the nature of reflex actions—*i. e.*, of sensori-motor nature. M. Vulpian has recently made a large number of experiments to ascertain the degree and character of the mechanical excitability of the gray cortex of the brain. In mammals, dog, cat, and rabbit, in the normal condition, he could never produce in this way the slightest movement either in the limbs of the opposite side, or in those of the same side. The mechanical stimulation was produced by rubbing the surface of the cortex with a small sponge, or a fragment of amadou, or with the points of dissection-forceps. Thus, in the dog and cat, after having carefully ascertained the points in which electrical stimulation produced movement of the face, or of the fore limb, or of the hind limb, varied mechanical stimulation was applied to the same points, but no movement could in any case be perceived. If therefore movements resulted from such stimulation in the experiments of Couty, the effect must have been purely accidental, or the consequence of some experimental error. The results were also negative when Vulpian repeated the experiments, after having produced inflammation of the surface of the sigmoid gyrus by tincture of cantharides, by essence of mustard, or by nicotine. The stimulation of the inflamed surface by various mechanical agents did not cause the slightest movement in any part of the body. Nevertheless, in Vulpian's experiments, certain effects were observed analogous to those which Couty regards as reflex, and which are produced by the mechanical excitation, not of the motor functions of the cortex, but of the sensory regions. When the sigmoid gyrus of the dog is galvanized or faradized, a certain amount of pain is produced even when the electrodes are placed a long way from the shreds of the dura mater, which are extremely sensitive. The points in this region which seem to be the most sensitive are those in which stimulation causes movement of the fore or hind limb on the opposite side, although these are far less sensitive than is the dura mater. But mechanical stimulation of these regions never, in Vulpian's experiments, caused indications of pain. Nevertheless, similar excitation of the deeper layers of the cortex, or in the subcortical portion of the white substance, usually caused unequivocal signs of suffering. When metallic wires are passed into the motor points of the sigmoid gyrus, and a faradic current of moderate intensity is passed through them, the movements caused in the limbs on the opposite side become stronger the deeper the wires are plunged into the cerebral substance, provided they penetrate to the white substance. These movements are absolutely the same as those which are produced by faradization of the surface of the convolution, and differ only in their greater extent and greater energy. In the same way, the pain becomes more intense when the wires reach the white substance. Thus the sensibility of the cerebrum itself is incontestably low. It is, however, augmented by repetition of the stimulus, and thus it is possible that pathological irritation may cause an exalted sensibility, which is evidenced by pain. It is only in the white substance beneath the sigmoid gyrus that mechanical stimuli elicit any evidence of sensibility. Elsewhere the white substance of the cerebral lobes seems to be absolutely insensible, although on this point M. Vulpian's experiments are not sufficiently numerous to enable him to speak with perfect confidence.—*Lancet*, Sept. 16, 1882.

FATTY EMBOLISM IN FRACTURES.—DR. ANGELO MINICH (*Lo Sperimentale*, March and April, 1882) has recently published a valuable monograph on this subject, of which the following are the conclusions based on his personal experience:

1. Fatty embolism occurs in all cases of fracture, except in children, where it is absent on account of the small amount of fat contained in the skeleton.
2. This accident frequently causes death or alarming symptoms.
3. In such cases the fat does not cause inflammation, infection, or pyæmia.
4. Death is caused by enfeeblement of the central nervous system.
5. The presence of free fat, or fat in the form of an emulsion in the urine, is frequently a sign of dangerous embolism.
6. In cases of death after fracture, a diagnosis of fatty embolism should only be made with great reserve.
7. The treatment can be only symptomatic, and is generally powerless to prevent death in grave cases.—*Rev. de Chirurg.*, October 10, 1882.

TO DISGUISE THE ODOR OF IODOFORM.—DR. O. PETERSEN recommends the addition of one drop of the tincture of musk to each 40 grains of iodoform solution.—*Med.-Chirurg. Centralb.*, Sept. 29, 1882.

CÆSAREAN SECTION.—A successful case of Cæsarean section is reported in the *Archiv für Gynæcologie*, xix. 3, by DR. LEOPOLD, of Leipzig. The patient was a woman 29 years of age, who had already borne one child, extracted by cephalotripsy after perforation. She was 125 ctm. in height, and had a universally contracted rachitic pelvis of a flattened ace-of-hearts form. The conjugate diameter was 6 ctm. The operation was performed under antiseptic precautions. Previous to opening the uterus, the serous membrane was dissected off a longitudinal elliptical space, and turned back, after which a melon-like slice of uterus was removed. This procedure was with the object of getting sufficient serous membrane to allow of its edges being turned down previous to the application of the sutures. At the end of the third week both mother and child were convalescent.—*Med. Press and Circular*, October 18, 1882.

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OF MEDICAL SCIENCE.

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SATURDAY, NOVEMBER 11, 1882.

THE THEORIES OF THE MERCURIAL TREATMENT OF SYPHILIS.

WHILE it may be admitted that the clinical evidence in favor of the administration of mercury in the treatment of certain stages of syphilis is quite sufficient to warrant its invariable employment, it is, of course, important to understand, if possible, its *modus operandi*.

The only theories pretending to explain its antisyphilitic properties, and at all worthy of consideration, may be classed under three heads: First. That it has an antidotal action by virtue of which it destroys the virus of the disease. Second. That through its so-called "tonic" properties it counteracts the anæmic tendencies of syphilis, and by improving the condition of the blood diminishes the severity of the attack. Third. That by promoting fatty degeneration and destructive metamorphosis it favors the disintegration and absorption of the new cellular elements which are found to pervade the tissues during the secondary period.

The first of these theories is alike incapable of complete refutation or of satisfactory demonstration. The existence of a virus has been denied, and has certainly never been proved. It is always imaginable as a more or less immaterial and elusive agency superadded to the demonstrable accompaniments of the disease, at one time infecting every portion of the organism, at another becoming dormant or quiescent for long periods, and then again breaking out with renewed vigor and virulence. It is certainly not a satisfactory theory which depends upon this mysterious agency and an equally mysterious destruction of it to account for the beneficial effects of mercury in syphilis, and it would only be acceptable in the absence of one more rational or better founded.

The facts that in the secondary stage the number of the red-blood corpuscles is markedly diminished and that under the use of mercurials it almost invariably increases, are well established by clinical and experimental observations. Is this, however, conclusive evidence of the possession of "tonic" properties on the part of the drug? If so, and if upon these properties its usefulness is contingent, why do not other tonics, especially iron, exercise an equal or at least a similar effect in the control of symptoms? That they do not is familiar to every syphilographer of experience, who, using them frequently as adjuvants, would not think of relying upon them exclusively.

As regards the last of these theories, two undeniable statements are made, viz.: that throughout the entire course of syphilis, and especially during the secondary period, extensive cell exudation and proliferation occur in all the tissues known to be affected by the disease, and probably in others beyond the reach of immediate exploration, and that the symptoms of syphilis are almost without exception produced in this manner. And next that mercury is in this, as in all other cases where it is desirable to prevent the migration and multiplication of new cell elements, or, especially, to favor the absorption and delay the organization of those already formed, by far the most potent drug in our armamentarium.

It is for this reason that we give it in meningeal troubles, in joint diseases, in pleuritic affections, in glandular enlargements, etc., and it is for the same reason, say the advocates of this theory, that it does good in syphilis. The anæmia of syphilis is explained by them as resulting from the impression made on the white-blood corpuscles by the newly formed and immature cells so abundant throughout the tissues, causing an arrest in the development of the former, prior to their transformation into red-blood-globules. The apparent tonic effect of mercury would thus seem to be due indirectly to its action on these new cells, which it would most readily influence by reason of their very instability. By favoring their elimination it would of course favor the uninterrupted manufacture of red-blood cells, which would increase in number.

The action of the drug in the later or tertiary stages of the disease is thought to depend on similar causes, but its therapeutic effects are then inferior to those of iodide of potassium, with which, however, it may be advantageously combined in the majority of instances.

Here again diverse opinions exist as to the *rationale* of the action of the iodides, and on some

future occasion it will be worth while to allude to and endeavor to elucidate them.

THE NATIONAL BOARD OF HEALTH.

FROM the full report of the proceedings of the American Public Health Association, and the letter of our Indianapolis correspondent, which are given in our last number, it is evident that the sanitarians of the country are almost unanimous in condemning the action of Congress in cutting down the appropriations for the National Board of Health, and also that they are upon the whole well satisfied with its organization and the character and amount of work which it has accomplished. This opinion is, we think, shared by the great majority of physicians in this country, and, in view of this prevailing sentiment, it is difficult to understand the motives which governed Congress in its attempt to asphyxiate, without totally destroying, the Board.

The statements of Dr. Cabell, the President of the Board, and of Dr. Bailhache, the representative of the Marine-Hospital Service, throw some light on this matter. It appears that the Treasury Department is hostile to the Board, claiming that it should have control of the disbursement of all funds appropriated by Congress for quarantine purposes, and preferring its own medical officer, the chief of the Marine-Hospital Service, as its agent for such work. The Marine-Hospital Service appears to be desirous of having the control of all quarantine work, claiming that it can perform this service at least as well as the Board, if not better, and with less expense. In this connection, the sixth resolution passed by the Association is especially significant, viz.:

"*Resolved*, That so long as the United States Government confines its maritime and inland quarantine service to the aiding of State and local boards of health, it is essential for the best results that such aid shall be through channels most generally acceptable to State and local boards of health whose coöperation is requisite, and we sincerely belive that the National Board of Health is the channel most generally acceptable."

The truth of this proposition seems indisputable.

We must confess that it has always seemed to us an unfortunate thing that quarantine duties and responsibilities should have been placed on the National Board in the first years of its existence—at all events so far as these involved executive functions. That the Board has done good work in securing comparative uniformity and simplicity in local quarantine regulations, we freely admit, and its influence in favor of proper inspection, disinfection, and prompt return to commerce of infected vessels, instead of the old style of detention for a month or more, has certainly been most beneficial. It is not clear to us, however, that it might not have effected all this equally well under the provisions of the Act creating the Board, which confined its work in regard to quarantine to the preparing a report on the subject.

The great value and importance of a national health organization depends upon its having the power and means to collect and diffuse information—to investigate the causes of disease, to educate the public, to furnish reliable data as to the sanitary condition of various places, and to bring to bear upon indolent and inefficient authorities the pressure of an enlightened public opinion. The work of the greatest permanent value which the Board has thus far done, has been in this direction; and yet it is precisely this class of work which the last House of Representatives selected for condemnation.

Putting aside the charges of extravagance made against the Board on the floor of the House—charges which we may consider hereafter—what were the reasons given for limiting the Board to work connected with cholera, yellow fever, and smallpox—*i. e.*, to quarantine, and to refusing to allow it to make investigations into the causes of diphtheria, or typhoid, or to publish its bulletin? On consulting the *Record*, we find that Mr. S. S. Cox, of New York, said: "I deny the right of the Federal Government to investigate the causes of disease. It has no more right to investigate smallpox than it has to investigate chickenpox or the measles." Mr. Robeson, of New Jersey, said: "We have confined the investigation to yellow fever and cholera, because the germs of these diseases are unknown, and because the specifics which are to meet and destroy them are yet undiscovered." Such are the views of two of the leaders of the House, displaying a depth of self-satisfied ignorance which we hope is not common among the members; for, if it is, there is small prospect of wise legislation on this matter.

With regard to the attitude of the Marine-Hospital Service in this matter, it does not seem to us to be quite satisfactory. It has the charge of the sick seamen and boatmen of the commercial marine, and has about $400,000 annually to expend for this purpose, besides special grants from Congress for the construction of hospitals. So far as we can learn, it has no more officers than are necessary to do this work; and it would seem as if it had plenty to do. Under the circumstances, the hostility of the Service to the National Board, and the openly avowed desire of its chief and representative to obtain control of quarantine, seem to us to be at least in bad taste, and not well calculated to attain its object. It would be much better for the Marine-Hospital Service to so manage the work with which

it is now charged, that there shall be a desire on the part of others to increase its field of action, and to wait for others to ask for the transfer of quarantine authority from the Board to it, rather than go into the lobby and urge such transfer itself.

It is the duty of the medical men of the country to look into this matter, and to endeavor to instruct their representatives in Congress so that such absurd utterances as those of Mr. Cox and Mr. Robeson will be estimated at their true value. On one point we think all physicians and scientific men can agree, viz., that the conjoint recommendation of the Board and the Academy of Sciences, made in 1879, that the United States should appropriate $30,000 per annum for skilled investigations into the causes of disease, and for sanitary surveys, was a wise one, and should be carried out, no matter who is to have charge of quarantine, or whether the United States is to interfere with quarantine at all.

SEWER GAS.

DR. F. H. HAMILTON, in the *Popular Science Monthly* for November, gives a rather pessimistic paper on sewer gas, taking the ground that it is the means of conveying scarlatina, typhoid, diphtheria, etc., and is the cause of much of the excessive mortality in cities; that all house plumbing is more or less defective, that water-traps will exclude neither gases nor germs, and that the only way to obtain safety is to exclude from those parts of the house in which we live, all plumbing having any direct or indirect communication with the sewers; in other words, that such plumbing shall be placed in a separate building or annex.

In this journal for September 2d, we gave a paper by Prof. Jos. G. Richardson, in which he argued that "the various theories to account for sewer infection in spite of air-tight traps, such as the siphoning out of traps, their partial corrosion and leakage, the absorption of sewer gas by the fluid sealing them, and its evolution from the inner or house surface, etc., may be relinquished," his reason being that a layer of micrococcus and mycelium may creep along the interior surface of a trap from the sewer to the house side and there give off its germs.

If these gentlemen are right, the residents of large cities are in a very dangerous position, and the only remedy suggested is either to build an annex for our plumbing, which in most cases is simply impossible, or to undertake to secure systematic and constant disinfection of all pipes, traps, etc., for which purpose there are various patent contrivances, the proprietors of which no doubt will extensively advertise the views above mentioned. Is it true, however, that the gases in a system of properly constructed sewers and connections are so very deadly? Is it true that the plan of house drainage which is now approved and recommended by the leading sanitarians and sanitary engineers of England and this country affords little or no protection against sewer gases or germs?

To the best of our knowledge and belief the answer to both these questions must be negative, and in this we agree with the immense majority of skilled engineers and scientific men who have investigated the subject.

Experience has shown that sewered cities are healthier than those which are not sewered, and that in cities partially sewered the mortality is less in those portions provided with sewers. This is notably the case in the city of Chicago. It is also found that diphtheria and typhoid fever are more prevalent in unsewered cities. The gases of sewers do not cause any specific disease, and are rendered harmless by sufficient dilution which may be secured by ventilation of soil-pipes and sewers. In a properly constructed system of sewers and house-connections there will be little or no offensive odor in the sewers. The great point to be kept in view in such a system is that all excreta shall be promptly and entirely swept out by a sufficient current of water. This cannot be done when sewers receive overflow-pipes from cesspools, for the discharge from these will always be more or less offensive.

In a proper system the communication between the sewer and the house soil-pipe is entirely cut off by means of a trap in the house drain outside the house, with an opening from the external air into this drain on the house side of the trap. The soil pipe is also continued up full size through the roof and left freely open at the top. With such an arrangement there is no danger of the passage of gases from the sewer to the house. The real danger is from minute particulate germs, and the practical question is, Can these pass a good ordinary water-seal trap? The experiments of Carmichael, Wernich, and Pumpelly show that they cannot, and so far as we know there is no record of any experiment to show the contrary. The test is not difficult of application—and until some competent observer obtains results different from those reported by the above-named gentlemen, we are bound to accept them. The fact reported by Dr. Richardson does not seem to have any bearing on this question. He found a fungous growth in a ball trap. But a ball trap is not recommended by the best authorities, and Dr. Richardson's observation simply confirms the unfavorable opinion we have long had of such contrivances. Nor does the Doctor present any evidence that the growth started from the sewer side of the trap. It seems quite as likely that it started from the house side. Again the character

of this growth is entirely different from that which characterizes the development of those microzymes which are capable of causing disease. It consists of creeping threads having a certain amount of consistency and firmness, whereas the germs which we know anything about are minute particles or single cells. The experiments of Prof. Doremus, to which Dr. Hamilton refers as proving the passage of gases through water traps, have really no bearing on the question under discussion. Prof. Doremus used the pure gases in a totally unventilated pipe—the actual state of things is a very dilute gas in a well-ventilated pipe—and under such circumstances Carmichael demonstrated by repeated experiments that the amount of ammonia passing through such a trap in twenty-four hours was from $\frac{1}{400}$ to $\frac{1}{200}$ of a grain, and that the amount of sulphuretted hydrogen passed in the same time is $\frac{1}{100}$ of a grain. These amounts cannot be appreciated by the sense of smell, and would have no effect on health were they one hundred times greater.

But, say the alarmists, your traps may be siphoned out. So they may if not ventilated—we are not defending a patent trap, or the usual contract job of plumbing; we agree that house drainage should be much more carefully looked after than it usually is, but the methods of securing a trap against siphonage have now been made clear by the experiments of Messrs. Bowditch and Philbrick published in the *Sanitary Engineer*.

In short, it seems to us that it is not yet demonstrated that it is necessary to fit up every wash-bowl, bath-tub, and water-closet with a complicated germicide apparatus, nor to build an annex to contain our house drainage, and we would advise our friends to make use of the best modern appliances, improve them if they can, but not try to frighten the public into hostility to house drainage and sewage, nor deny the results obtained by careful, well-known scientific observers, without having made a few experiments of the same kind themselves.

ASEPTIC VIRUS.

IF some method could be discovered by which all extraneous qualities could be eliminated from vaccine virus so that only the really pure and isolated virus of vaccinia remained, one of the most formidable obstructions to the progress of universal vaccination and the extinction of smallpox would be overcome. The reports from various parts of the country, during the recent prevalence of smallpox, of well-authenticated cases of vaccination attended by very serious results from the inoculation of septic matter, and the consequent discredit of this valued means of prophylaxis, are suggestive of the need of renewed efforts in this promising and not altogether novel field of enquiry.

Three years ago Köhler experimented with thymolized lymph (one part of lymph and two parts of thymol solution, 1:1000) with such success as to warrant its use in the vaccine institution at Halle ever since. More recently, Dr. Richard Pott has ventured upon the use of other antiseptic agents, such as salicylic acid, boracic acid, and carbolic acid, with, as he claims, commendable success. Whether or not a solution sufficiently strong to neutralize all foreign and accidental admixtures will not also render inert the vaccine virus itself, is a question which needs further investigation. A five per cent. solution of carbolic acid had this effect.

The advantages claimed for the aseptic lymph are the following:

1. Any erysipelatous virus in the vaccine is probably destroyed.

2. Aseptic lymph may be preserved in good condition for years.

3. It is thinner, contains no fibrinous coagula, and with it twice as many children may be vaccinated as with the undiluted lymph—a circumstance of some importance in the present large demand for vaccine.

THE TREATMENT OF TYPHOID BY ERGOT.

AMONGST the novelties of medical practice with which we are now surfeited, is the proposed employment of ergot in the treatment of typhoid. The results of this practice amply justify its introduction if we may rely on the published evidence. M. DÉBOVE administers in certain cases of typhoid one gramme (15½ grs.) of ergot in two doses. Of 24 cases, 8 were very grave, 11 were serious, and 5 were of moderate severity, and of these but one proved fatal. In a former series of 6 cases, 1 was very grave and 5 were of moderate severity, and all recovered. In still another series of 6 cases, 3 being very grave, 2 serious, and 1 of moderate severity, all recovered but one.

There is no explanation of the period and manner of exhibiting the remedy given by M. Débove in his report to the Academy of Medicine. As the whole amount of fifteen grains is given in two doses, we may assume that one is exhibited on each of two days of the first week.

OUR esteemed colleague, Dr. Seguin, has been visited with a calamity than which none greater can befall any man. In the presence of such an affliction, words are powerless to convey an adequate sympathy. We content ourselves, therefore, with the simple assurance that we, as well as others of his numerous friends, are not unmindful of his sufferings, and share as far as we may the anguish of his bereavement.

REVIEWS.

TWO HARD CASES: SKETCHES FROM A PHYSICIAN'S PORTFOLIO. By W. W. GODDING, M.D., Washington, D. C. Pp. 257. Boston: Houghton, Mifflin & Co., 1882.

OF the two hard cases the subjects of these essays, one was an inmate of the Taunton Asylum, Mass., and the other was Guiteau. The author, Dr. Godding, is an asylum superintendent. He comes forward with two cases to illustrate the position that mere eccentricity and faulty education make insanity. According to this view, half mankind should be shut up in an asylum to end the miserable sham by suicide, as was the final destiny of hard case No. 1. It would require a nice exhibition of casuistic skill to determine whether this hard case owed his final step to an irresistible impulse or to the horrible tedium of asylum restraint. He committed suicide after several escapes, and on his last return—it appears to us—in sheer desperation. What must be the future of a youth who has spent many years in an insane asylum? What hope for employment? That Dr. Godding's No. 1 should, in absolute despair, have returned to the asylum to commit suicide, seems to us a perfectly suitable conclusion to such a life.

The second "hard case," Guiteau, was, according to Dr. Godding, insane, and had always been so. Every act of his life, from his youth up, is a proof of mental perversion. He was not merely an eccentric, a deadbeat, an imposter, but insane. Our author does not define the form of mental derangement of which this criminal is the victim. He probably takes shelter behind the convenient *primäre verrücktheit*, which has rendered so much service to a certain group of mental philosophers.

The book is written in a popular tone, and is rather intended for literary and general than medical readers. It is very pleasant reading. Dr. Godding has a trained literary faculty, and hence his effort partakes more of the sensational than of the scientific. With this limitation we can commend it to our readers as an interesting book.

THE SURGICAL TREATMENT OF HEMORRHOIDS. By WALTER WHITEHEAD. Reprint from the *British Medical Journal*. 8vo. pp. 15. London: J. & A. Churchill, 1882.

MR. WHITEHEAD proposes to abandon the ligature and return to the knife, to seize each hemorrhoid by forceps, isolate it, or each separate lobe, if it be composite, and dissect it out by a **V**-shaped incision, twisting any arteries that bleed and uniting the margins of the mucous membrane by sutures.

In spite of the cases given, the method we fear is full of danger from hemorrhage and possible cicatricial stricture, but the scriptural rule is good, "Prove all things, hold fast to that which is good." His directions as to rest for three days previous to any such operation, in order to reduce the piles to their smallest size, his suggestions as to diet, to cleaning out the rectum, dilating the sphincter etc., are judicious.

NITRO-GLYCERINE IN ANGINA PECTORIS. By WILLIAM MURRELL, M.D., M.R.C.P., etc. Pp. 78. Detroit, Michigan: Geo. S. Davis, 1882.

THIS libellus is an interesting account of Dr. Murrell's study physiologically and therapeutically of nitro-glycerine. We owe chiefly to the author our present knowledge of the action of this substance, although it had been investigated to some extent before he undertook the study of its actions.

Our readers will, doubtless, remember that we commented on the properties of this agent some time ago, and indicated Dr. Murrell's share in reducing the existing information into exact order, and in establishing its therapeutical uses.

This brochure is a nicely arranged book, from which the reader can obtain full information on this interesting remedy.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 2, 1882.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

AFTER the reading of the report of the previous meeting by the Secretary, the deaths of the non-resident Fellow, Dr. J. Foster Jenkins, of Yonkers, and of the Corresponding Fellow, Dr. James C. Townsend, were announced.

The scientific work of the evening consisted in a paper by DR. W. EDWARD FORREST, entitled

TREATMENT OF LABOR, WITH REFERENCE TO THE PREVENTION OF SUBSEQUENT UTERINE DISEASE.

Dr. Forrest having been summoned by telegram to the bed-side of his sick father, his paper was read by the Secretary of the Academy, Dr. Katzenbach, an abstract of which is as follows:

There is an unquestionable relation of cause and effect between the puerperal state and many cases of uterine disease. Gynæcologists tell us that from one-third to one-half of the cases of this disease that come under treatment date their trouble from a previous confinement. If such be true, and we have no reason to doubt the statement, it behooves us as obstetricians to look into this matter closely and see if the responsibility rests in any degree upon us. When we consider how chronic, how costly, and how injurious to mind and body uterine diseases are, we must realize that the prevention of this curse of the female sex is worthy our profoundest study and our greatest care. *Dr. Forrest did not wish to be understood as considering the obstetrician's responsibility for all the diseases of the uterus that follow the puerperal state, but there could be no question that some of the causes might be prevented by an intelligent and scientific management of labor.* We must sometimes feel that, had obstetricians made as great advances in *preventing* diseases as gynæcologists have in curing them, they would be less prevalent. The author stated that it would be his aim, first, to make his remarks practical; and, second, to found his statements as far as possible on anatomical and physiological facts.

Uterine disease, as a sequel of labor, may arise from two general conditions: First, from laceration of the pelvic tissues; and, second, from subinvolution of the uterus and vagina either with or without laceration.

Laceration, as a cause, is first in time as well as in importance. Indeed, subinvolution, as a rule, can be traced to laceration. Hence, it is of the utmost importance to study the manner in which lacerations are produced, and the means by which they may be avoided or remedied.

As to the frequency of laceration of the cervix, Dr. Emmet found that of all the women coming under his treatment for uterine disease, one-third were suffering from laceration of the cervix.

Tables furnished by Dr. Sinclair, of the Boston Lying-in-Asylum, that out of 216 women examined by him,

on an average of 16 days after confinement, 76 or over 30 per cent. had laceration of the cervix, of these 44 were primiparæ and 32 multiparæ, 76 had fissure of the cervix, while 44 had well-marked or deep laceration. Of these, only 3 were forcep cases. From the above statistics it was plain that laceration of the cervix is a common accident during labor. Its frequency had not been suspected because physicians, as a rule, had not been in the habit of examining patients carefully at the close of the puerperal period, say 12 to 20 days after labor.

Not all the women with laceration of the cervix suffer from apparent uterine disease, but, as already stated, a large percentage of such diseases spring from laceration.

The most common cause of laceration spoken of in our text-books is rapid labor, or a rapid first stage of labor. Emmet says: "From *a priori* inferences I was prepared to learn that rapid labor was the most common cause of laceration of the cervix." Dr. Forrest, however, was of the opinion that this was the least common of all the causes of laceration. In support of this opinion he stated that dilatation is usually spoken of as if it were principally due to the mechanical pressure of the head or membranes upon the cervix. From this conception would arise a second theory, as a corollary to the first, namely, if the head descends slowly, the os will be less likely to be torn. Now, these two theories are directly contrary to the facts. Statistics show that only four per cent. of lacerations are characterized by rapid first stage of labor, while over thirty per cent. are marked by tedious first stage. In explanation of this fact it was stated that dilatation is not a mechanical but a physiological process. It might be called relaxation rather than dilatation. If dilatation were due to pressure alone, or mainly, why, in one case, should a thin cervix resist for hours hard pains and great pressure without dilating, while in any other case the os might dilate in a few minutes almost without pain. The author had had two cases where the os must have dilated, or rather relaxed, while the women were asleep, so that the children were born immediately upon the awakening of the mother, and with a single pain. He had observed the os dilate from the size of a silver dollar to full dilatation with a single pain, yet without laceration. Among uncivilized people rapid and unexhausting labor is the rule.

From these facts we may infer that normal dilatation of the os is rather a physiological than a mechanical process. The preparation for this process commences weeks before labor. We might infer that in natural labor there is not a contest between the body of the uterus and the cervix; but that there is harmony of action between them, so that when contraction commences in the fundus, relaxation takes place in the cervix. It was only when perverted nerve force disturbed this harmony of action that mechanical dilatation of the os became an important factor. Reil nearly eighty years ago enunciated this theory, ... t during pregnancy the uterine polarity resided in the cervix, and that at the commencement of labor the polarity leaves the cervix and resides at the fundus, and that rhythmical contraction above then goes on, with relaxation below. This theory explains the statistics of Dr. Sinclair already referred to, in which of 76 lacerations, only 3 were characterized by rapid first stage of labor; that is, a first stage less than three hours in length. We can now understand why a rapid labor so seldom causes laceration of the cervix. First, rapid labors, as a rule, are natural and have undisturbed nerve relations; second, there may be no more pressure on the cervix than in tedious labor, because the cervix in the former case gives way before the advancing head; third, in the rapid labor the resiliency of the cervix is not exhausted by long-continued pressure, and therefore pressure is less likely to cause laceration. But suppose that precipitate labor does threaten laceration. The theory above given indicates the remedy, viz., the administration of something that controls perverted nerve force; hence, chloroform, chloral, or morphia. The finger of the attendant on the child's head will modify undue pressure on the cervix.

The second cause mentioned in our text-books is tedious labor, or, rather, a tedious first stage of labor. This is spoken of as a possible cause rather than a most important one. Dr. Sinclair's tables show that of 37 well-marked cases, 34 were characterized by a first stage of labor lasting from 12 to 36 hours. Dr. Emmet had found that 30 per cent. of the cases treated by him were attributed to tedious labor, which was opposed to his *à priori* inferences. This proportion would be greatly increased by the addition of forceps cases which could be placed under the head of tedious labor.

It seemed evident, then, that tedious labor is a very prolific cause of laceration of the cervix. Anatomical reasons in support of this view were then adduced by the author of the paper. Copies of Braun's plates, made from frozen sections, were presented, showing the relation of the pelvic contents in the ninth month of pregnancy and at the beginning of the second stage of labor. It was pointed out that the change which had taken place in the first instance was that the bladder occupied a position behind the pelvis. The os internum and os externum were on a line with the pelvis and that there was a solid pelvic floor. In the second instance it was shown that the os internum had now risen some distance above the pelvis. The bladder had likewise been drawn upward and the urethra lengthened. The walls of the uterine body have become shorter and much thicker, while the cervix, on the other hand, has become long and very thin. In this case the os internum had dilated in *harmony* with the dilatation and retraction of the os internum, and the parturient canal was ready for the speedy delivery of the child.

In the case of tedious labor, when the os externum does not dilate in harmony with the os internum it was shown that as labor goes on hour after hour, the uterine body will shorten, the os internum and bladder will be drawn upwards by the shortening from one to three inches above the pelvis, and that as the os externum does not dilate the shortening of the uterus and the retraction of the internum must take place at the expense of the cervix which becomes stretched to three or four inches in length and as thin as parchment. This could be easily demonstrated upon a living patient. If an examination of a case of tedious labor was made where the delay was in the first stage, it would be found after some hours that the bladder, even if it contained bu an ounce of urine, would present itself as a bulging tumor halfway to the umbilicus, and upon passage o the catheter the urethra would be found three inches in length.

What then was the remedy for this prolific cause of laceration of the cervix? evidently the prevention of tedious labor. This was to be accomplished by restoring, if possible, the harmony of action that should exist between the body and the cervix uteri, so that dilatation below may keep pace with contraction above. The remedies to be used in the shape of drugs were morphia and chloral, which were to be given, not as commonly supposed, for their relaxing effect on the cervix, but for the purpose of relaxing disturbed nerve function. They should be administered before nerve force had become exhausted. They were to be administered in moderate doses, for the object was not to paralyze the uterus but to regulate nerve action. Gentle manual dilatation of the os was recommended as a useful measure.

The indication for action will be found from a study of the position of the bladder by observing when the utero-cervical junction begins to appear above the pelvis, showing that the os internum has dilated, and what is of more practical importance than either of these signs, by watching the formation of what Dr. Forrest calls the anterior vaginal cul-de-sac, which is formed between the pelvis and the cervix by the rising of the bladder.

Why should one woman with a normal pelvis and the child in a favorable position suffer for hours before the os dilates, while another woman, whose structure is apparently the same, or even a weaker muscular development spend about an hour in the first stage. This question could not be easily answered, but the process was probably governed by nervous conditions, the laws of which we have not yet fathomed.

Instrumental delivery was often spoken of as a cause of laceration of the cervix; undoubtedly, the forceps in careless and unskilful hands may give rise to this accident, but it has been shown that tedious labor is a common cause, and it is in just such cases that the forceps is used. It is impossible to say how many lacerations are directly due to the forceps. The truth is, that the forceps when carefully used seldom cause laceration.

When the profession are united in a uniform system of observation, we would have a ground on which to make some positive deductions.

Digital dilatation is spoken of as a frequent cause of laceration of the cervix, but the author was convinced that, when intelligently employed, it would not only not cause laceration, but might be a most important means of preventing it. The time for this measure is when the evidences are present to show that the os externum is not acting in harmony with the lower uterine zone.

Abnormal presentation may be one of the causes of laceration of the cervix, but it is hardly within our province to speak of it here.

Premature rupture of the membranes, if it occurs spontaneously, may predispose to such an issue. It is hardly necessary to caution against intentional rupture of the membranes until the os was dilated.

The giving of ergot before the os is dilated or ready to dilate, since it is unknown among intelligent physicians, hardly need to be referred to.

Supposing, however, after taking all possible precautions, laceration of the cervix occurs, as it sometimes must of necessity, what is the duty of the accoucheur in order to remedy this trouble and prevent future uterine disease. The first indication was to keep the wound clean and disinfected; the second was to bring the lips as nearly together as possible by means of stitches, plasters, or compressors. The utmost cleanliness should be enforced. The nurse should be instructed to give three or four injections daily. Stitching was hardly to be thought of; plasters and compressors could not be employed. Dr. Forrest had recently experimented with elastic bands which were slipped over the cervix in order to keep the torn cervices approximated. This procedure was still in the experimental stage, and Dr. Forrest was not yet prepared to give the results of the treatment.

Subinvolution is a term that has been of late years in vogue among foreign pathologists. Dr. Forrest considered this condition not so much a cause of uterine disease as constituting in itself uterine disease. Normal involution of the uterus may be supposed to be completed in from twelve to twenty days, instead of from four to eight weeks, as usually supposed. Various conditions might interfere with the process of involution. Dr. Emmet says he does not remember treating a case of subinvolution without finding more or less laceration of the cervix. Laceration of the perineum is said to be a common cause. Septicæmia, especially when associated with laceration of the cervix, is a most potent cause of subinvolution. The obstetrician is more frequently responsible for septicæmia than almost any other complication that may occur during labor.

Loss of blood, general debility, nervous excitement, too early leaving the bed, may all be causes of subinvolution. Subinvolution may be avoided to a greater or less extent by tonics, small doses of ergot or the wine of American ash. The patient should be kept in a recumbent position, with an undisturbed mind, and, above all, the utmost cleanliness should be maintained.

The last and most important portion of this paper, the author stated he was unable to put in shape for reading for want of time.

DR. BECKWITH agreed with the author as to the advisability of examining all patients for laceration within six weeks after labor.

DR. CASTLE said that he was not entirely prepared to accept the author's conclusions in regard to the *rationale* of laceration of the cervix. There was at least one cause for delayed labor in the first stage which the author did not mention, namely, slightly narrowed pelvis. This he believed to be the real cause very frequently, when it was supposed to be due to rigidity of the cervix. Another statement which he would make was in regard to the œdematous condition of the distended cervix. He believed that the softening which takes place during the first stage of labor was due to œdema, and hence it was desirable that œdema should exist. The hydrostatic pressure exerted upon the cervix by the bag of water was another factor favoring an œdematous condition of the cervix. In cases of early rupture of the bag of water we meet with rigid non-œdematous cervici.

DR. C. C. LEE felt no little diffidence in expressing his dissent from some of the views contained in the paper, partly because of the great worth and value of many of the suggestions contained in it, and partly because of the author's absence. In many points he agreed perfectly with Dr. Forrest. He believed, as did Dr. Forrest, that in a majority of cases of laceration of the cervix, it would be found that delayed labor was the cause. He had also looked upon the œdematous condition of the cervix as one of the causes of laceration. When excessive laceration of the cervix occurred, it could be detected upon the introduction of a speculum by the bright red blood flowing from the torn surface, in contradistinction to the small quantity coming from the fundus. He referred to three cases in which he had resorted to reparative operation immediately after severe laceration of the cervix. In the first he used silk stitches, in the second wire, and in the third serre-fines. All three operations were most signal failures. From this experience, he had resolved never to attempt the operation immediately after delivery unless hemorrhage was so profuse as to endanger the patient's life.

DR. LUSK called attention to the fact that there were two kinds of rapid labor, one in which the os was undergoing an imperceptible relaxation for days or weeks, after which a few sharp pains would result in the speedy delivery of the child. In these cases lacerations were very infrequent. There was one other class of rapid labor, in which the pains began without this previous relaxation on the part of the cervix. Patients would from the very first bear down, and thus by a voluntary muscular effort force the head through the unprepared cervix, under which circumstances very bad lacerations were apt to occur. He called attention to the fact that in the use of the forceps traction should be made during the intervals of pain, and should cease immediately upon the beginning of pain.

TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, November 2, 1882.

THE PRESIDENT, EDWARD L. DUER, M. D., IN THE CHAIR.

DR. ROBERT P. HARRIS exhibited *Twenty-three Casts of Female Bony Pelves*, illustrating the varieties of deformity affecting labor. They were obtained in Paris, by Dr. T. Hewson Bache, for the Museum of the College of Physicians.

PURPURA HEMORRHAGICA.

DR. HENRY BEATES related the history of a child healthy for the first four months of its life, at which age it was attacked by thrush; ten days later an ecchymosis of purpuric character appeared on one leg, and a few days later spots of the same character appeared over the body; on the fifth day the stools were tarry, showing intestinal hemorrhage; the bronchial secretion was also stained with blood; on the seventh day a hemorrhage started from an abraided spot on the perineum; various local styptics were applied to this spot without result, until a red-hot needle was used as a cautery; on the tenth day a hemorrhage occurred from the canthus of one eye, and on the fifteenth day the child died from exhaustion. At the autopsy the internal organs were found quite exsanguine.

DR. BEATES also reported a case of

BURSTING PELVIC CYST.

The patient had been for some time in poor health. Nine months ago she observed a tumor in the right iliac region. On one occasion, after slight exertion she felt something give way; this was followed by intense pain and collapse. She recovered and has had no return of the tumor.

HEMORRHAGIC DIATHESIS.

DR. WM. SAVERY related the history of a boy, five years of age who had fallen and received a slight wound of the scalp from a nail sticking out of a post. It was a mere scratch, and did not need a stitch to hold it together, but it bled profusely. All sorts of domestic remedies, including cobweb, had been tried without avail. The doctor finally succeeded in arresting the hemorrhage with lint wet with Monsel's solution and continued firm pressure. A few days later the same boy fell off of one step on to the floor. There was no external wound nor loss of blood, but the side of the face was enormously swelled from hemorrhage into the tissues. A course of iron and tonics has improved the boy's appearance, but he is still pale.

DR. HARRIS inquired if there was any history of hemophilia in the family? Had the boy large knee-joints? There is a hemorrhagic diathesis entirely distinct from true hemophilia. The latter is rare in cities, but is more frequent in the country. The descent is through the females of a family but the disease appears only in the males; the Jews in certain districts of Germany present many examples. There is a remarkable family near Elkton, Md.

DR. SAVERY replied that there were no evidences of hemophilia in the family. The mother was pallid, had red hair, but did not lose much blood in labor.

DR. HORACE WILLIAMS had seen a case of obstinate and prolonged hemorrhage after the extraction of a tooth; it was finally stopped by fitting a cork into the alveolar cavity. An infant aged nine days was attacked with purpuric spots over the body and bleeding at the navel. To the latter were applied successively styptic colloid, tannin, Monsel's solution, Monsel's salt in powder, and finally transverse pins and figure-of-eight ligatures; but the bleeding reappeared as soon as the latter came away, and the child finally died from loss of blood.

DR. R. H. CLEEMANN had under his care a young man who had previously suffered from profuse hemorrhage for two days, consequent on the extraction of a tooth; the hemorrhage was finally stopped by Dr. Hartshorn, who plugged the cavity with a styptic. Dr. H. advised the young man never again to run the risk of a hemorrhage of any kind, as it would probably prove fatal. Recently he had been suffering from a toothache which nothing but extraction could relieve. Dr. Cleemann put him on gallic acid internally and tannic acid locally for two weeks before the extraction, which was accomplished without any unusual loss of blood. In a case of nasal hemorrhage, the anterior and posterior nares were plugged, but then ecchymosis appeared around the eyes and the plugs were removed; transfusion of a few ounces of blood was employed and the hemorrhage ceased and did not return; the patient died three months later of phthisis.

DR. E. L. DUER considered gallic acid a very valuable remedy for hemorrhage. He would like particularly to bring before the society, the old but neglected remedy, erigeron or flea-bane: the tincture and the volatile oil are very efficient when used internally to stop hemorrhage. The oil may be given in doses of ten drops every ten minutes until the bleeding is checked, after which it may be continued at longer intervals until the tendency has passed away.

DR. GITHENS had been using oil of erigeron for a number of years with remarkable success as an internal hemostatic. It was far more reliable than any other with which he was acquainted.

IMPERFORATE RECTUM.

DR. GITHENS reported an autopsy which he had performed that afternoon upon a baby aged twelve days, that had died from occlusion of the bowel. The anus was perfect, but as no meconium was passed, an examination of the rectum was made; the latter was found to be a cul-de-sac about one and a half inches in depth; as a tumid swelling could be felt above, a nick was made at the upper extremity of this cul-de-sac, and gas and meconium escaped; two days later it was found necessary to enlarge this opening, but at no time did any solid fecal matter pass, nor did the color of the milk appear in the feces. Death occurred from collapse from escape of the contents of the bowel into the peritoneal cavity. At the autopsy the rupture could not be found; the transverse colon was filled with well-digested milk; the upper part of the descending colon doubled sharply on itself and was bound down tightly to the posterior wall of the abdomen, there being no mesocolon on the left side; the lumen of the colon at this point was also obstructed by a hypertrophied fold of mucous membrane, which formed a septum reaching half across the colon, and had prevented the passage of the solid portions of the feces below that point; the rectum was distended with semi-liquid dark fecal matter.

A very remarkable circumstance in connection with this case is the fact that a former child of the same parents died at the end of the third day, there having been no discharge from the bowels, and the mother's aunt, on her mother's side, had lost five children out of seven, from the same cause; one of the five had been operated upon, but the condition returned after the lapse of six months.

The report of the *microscopical examination* of specimens presented at the last meeting by Dr. Wm. Parish, was made by DR. H. BEATES.

The specimen removed from the cervix uteri of case No. 2, is carcinoma of the encephaloid type.

The small tumors taken from the uterine cavity of

case No. 1, for the relief of continual hemorrhage, prove, on section, to be hyperplastic glandulæ utriculares, mncous membrane, and parenchyma. The intimate relationship of the uterine mucous membrane with the muscular structure is clearly shown, and the features of clinical interest in this instance well demonstrated. The mucous follicles or glands located on the free border in considerable number indicate that the growths originate from the fundus. The follicles are the seat of active epithelial proliferation and papillomatous degeneration, which latter process, it may be remarked, is *not* characterized by the regular relationship of cells to vessels seen in typical or benign papilloma, but by large multi-nucleated, irregularly shaped cells arranged in groups without any apparent regularity or system. This condition is strongly suggestive of carcinoma. The lesó-fibres are found to be infiltrated in many places by proliferated epithelium cells, showing that the morbid process involves the parenchyma.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, October 26, 1882.

THE PRESIDENT, JAMES TYSON, M.D., IN THE CHAIR.

HYPERTROPHY OF THE PROSTATE GLAND, ACCOMPANIED BY PROFUSE AND FATAL HEMORRHAGE.

The case was presented by Dr. J. B. Roberts for Drs. J. M. Adler and William Hunt.

The clinical history furnished by Dr. Adler is as follows: The patient, aged 66 years, of medium size, weighing 150 pounds, of regular habits, had enjoyed good health until within one year past. On a number of occasions during the past year he has had slight hæmatinuria. He passed his urine with ease, and only complained of slight perineal pain. On 12th of September last he arose in the morning in his usual health, but soon after breakfast he was attacked with sudden, acute pain in the bladder which he was unable to empty. Dr. Adler saw him in a short time, when the patient complained of great hypogastric pain and was much prostrated, with a blanched, sallow, cold skin, and a rapid and feeble pulse. A well-defined pyriform swelling occupied the hypogastric region, extending upwards to the umbilicus. After stimulants and morphia had been given, about one pint of fluid blood was drawn off by the catheter, after which, this instrument becoming blocked, a double one was introduced by means of which injections of warm water were thrown into the bladder, and another pint of broken-down coagula was removed. A solution of alum, 20 grains to the pint, was then introduced into the bladder and allowed to remain. Despite the internal use of ol. terebinth. and ol. erigeron., with opium suppositories, the hemorrhage continued, necessitating recourse to the catheter, injections, etc., to free the bladder from coagula. Death ensued on the sixth day from exhaustion induced by the repeated hemorrhages. The diagnosis arrived at by Drs. Hunt and Adler was carcinoma of the neck of the bladder.

Sectio cadaveris: The autopsy was a partial one, made in the undertaking establishment. Upon incising the hypogastrium, the distended bladder was at once seen, containing nearly a pint of clotted blood. This was removed by the hand through an opening in the viscus, when Dr. Roberts felt near the vesical neck, protruding into its interior, a pear-shaped mass, about the size and shape of the adult uterus. This, as the members of the Society saw, was evidently a greatly enlarged middle lobe of the prostate gland covered by unaltered mucous membrane. The lateral lobes were also enlarged. The mucous lining of the viscus was smooth and congested, presenting at one point two small circular depressions with clearly cut edges. Owing to circumstances, no further examination of the body was made.

DR. ESKRIDGE inquired whether the blood removed from the bladder at the autopsy presented an urinous odor. He had treated recently an interesting case of recurring hæmaturia, supposed to be due to a varicose condition of the veins of the vesical neck. The patient was a man æt. 77 years, who five years ago, and at intervals since, had lost considerable blood. The former attacks had yielded readily to ergot, but shortly after the onset of the last one, Dr. Eskridge had found the bladder distended with a large clot which he had been unable to break down by either alkaline or acid solutions. The secretion of urine was suppressed during the last twenty-four hours of the patient's illness, the blood drawn from the bladder presenting no characteristic odor. The man died apparently from uræmia, two or more severe chills preceding death, although no convulsions occurred, and he remained conscious to the last. Unfortunately, no post-mortem examination was obtained.

DR. FORMAD thought that the growth resembled rather a sarcoma than a carcinoma. He had seen two instances of round-celled sarcoma of the prostate. All growths starting from the epithelia of the genito-urinary tract, as well as from the cavity of the uterus, the kidneys and supra-renal bodies; in short, growths of all the organs arising from the middle layer of the blastoderm microscopically resemble sarcoma, and usually prove to be such when microscopically examined.

DR. TYSON said that this specimen possessed a special interest for him, inasmuch as he had had his attention forcibly directed to the differential diagnosis of a simple hypertrophy of the prostate from malignant disease of that organ, by having lately under his care a gentleman where ergot at first proved of much benefit, but in whose case the catheter was soon demanded. This instrument was used with unusual skill and gentleness by the patient himself, notwithstanding which blood occasionally followed its use. Exceedingly severe pains next developed, radiating from the bladder to the testicles, groins, and inner aspects of the thighs. Emaciation soon set in, and he died at the end of 15 months. At the autopsy malignant disease of the prostate was found, involving by infiltration the lateral aspects of the bladder and the neighboring parts so as to compress the nerves, thus accounting for the radiating pains complained of. He would like to know from Dr. Roberts whether his case presented this symptom of radiating pains, and also the source of the hemorrhage, as the smooth surface of the growth and the healthy condition of the mucous membrane of the bladder are such as to excite surprise.

DR. ROBERTS, in reply to the various questions propounded, said that only having made the post-mortem examination, he knew nothing beyond the facts given in the notes read. As to the source of hemorrhage, he would call attention to the two small erosions of the mucous membrane of the bladder as the probable source.

Report of the Committee on Morbid Growths: The specimen presented by Dr. Roberts, upon microscopic examination, is found to consist of the histological elements composing the prostate gland. There is no evidence of any neoplasm, except a numerical hypertrophy of the structures of the organ. The specimen is an hypertrophic prostate gland.

CASEOUS DEGENERATION OF THE KIDNEYS

presented by DR. J. B. ROBERTS for Dr. Dunmire. Owing to Dr. Dunmire not having seen the woman until within a few hours of death the history is of necessity imperfect. She was a married woman 39 years old, whose husband

is said to have infected her with some form of venereal disease. The husband had been dead for about one year when the patient first came under treatment. There were no evidences of syphilis, so that the supposed venereal affection of the past had been presumably gonorrhœa. When seen September 14, 1882, was exceedingly ill, gave a history of general ill health for the past few years, but dated the present trouble some weeks back when she had bathed in the surf while menstruating. This was followed by a chill, since when she had steadily grown worse. When Dr. Dunmire saw her, she complained of sore throat, difficult deglutition, anorexia, sick stomach, pain in the back, with sharp pain running towards the groin, especially on the right side, tenderness over the abdomen, and frequent scanty micturition. The pulse was 140, the temperature 103°, and there was profuse leucorrhœa. An unfavorable prognosis was given, which was soon verified by her becoming unconscious and dying six hours later.

Autopsy: The abdomen alone was allowed to be examined. All organs healthy except kidneys and bladder. The latter contained a little urine and mucus, its walls were much thickened, and its lining membrane was congested. The left kidney had little true kidney structure left, but was converted into a group of seven or eight cysts containing a white cheesy material of a moderately firm consistence. The ureter was much dilated and thickened for about three inches from the pelvis of the kidney. The right kidney was normal in outline, but when incised revealed one large cyst with creamy contents, and also another small cavity containing a few minute calculi. Several of these could be felt through the walls of the normal ureter, thus accounting for the ante-mortem renal colic. The perinephritic structures were unchanged, as well as the capsules of the kidneys, although these latter were perhaps more adherent than normal.

TUMOR OF THE MEDIASTINUM

exhibited by Dr. W. S. LITTLE for Dr. G. C. Smith, of Rondout, New York.

The history of the patient from whom these specimens were removed is in brief as follows: A young man æt. twenty-four years, had been but a few days under Dr. Smith's care, having come from Boston, where his physician had pronounced him phthisical, and had recommended a sea voyage. During the past few months small nodular masses had developed in the muscular tissue of the right chest-walls, near the median line in front, and also posteriorly. The axillary and supra-clavicular glands were involved. Shortly after Dr. Smith first saw him he developed marked dyspnœa, and died suddenly, without any evidences of marked lung disease, except, perhaps, some symptoms of pleuritis. There was apparently mitral disease. Anasarca, especially of the lower extremities, gradually developed.

Sectio cadaveris: The skin was hard and friable; nodular masses were found disseminated through the muscular tissue of the chest-walls, which had undergone some species of degeneration; the costal cartilages presented evidences of a degeneration similar to that seen in the muscle. On removing the sternum, the subjacent tissues were markedly pigmented, and the anterior mediastinum completely obliterated by a mass of the size and shape of the half of a large lemon, which pressed against the heart. The large bronchi were involved in the growth, otherwise the lungs seemed healthy, and evidences of slight pleurisy were found. The pneumogastric nerves were both involved, chiefly the left, and on further dissection the disease was found to occupy all of the lower part of the posterior mediastinum, involving the contiguous osseous tissues. The nerve involvement explains the sudden death. The diaphragm was also involved in the lower portion of the growth. The four portions of the growths shown to the Society are, 1st. One of the subcutaneous nodules; 2d. A small portion of the left lung, near its root; 3d. A portion of the anterior mediastinal growth, with part of trachea, bronchi, and aorta; 4th. One-quarter of the tumor, which involving the diaphragm, projected from the left thoracic wall into the chest cavity.

Dr. Formad inquired whether there were any other evidences of cancer in the remainder of the body.

Dr. Little replied that none were detected.

Dr. FORMAD said that he was unaware of any specimen of primary carcinoma of the mediastinum on record, and moved the reference of the specimen to the Committee on Morbid Growths, as it was probably a sarcoma.

Report of the Committee on Morbid Growths: "The mediastinal growths are found on microscopical examination to consist of a mass of hypertrophic lymphatic glands, much pigmented. There are also seen adipose and fibrous tissues in a state of active proliferation."

CIRRHOSIS OF LIVER IN THE STAGE OF ENLARGEMENT

exhibited by DR. E. T. BRUEN. F. W., aged 20 years, colored, has worked on farm since boyhood, and has been much exposed to weather. His habits were temperate, he was free from either syphilitic or malarial taints. Father is still alive, the mother died of phthisis. He was never robust, but had had only one severe illness, viz., typhoid-fever, from which he convalesced perfectly, but he readily "took cold." He was first seen by Dr. E. T. Bruen, at the University Hospital, in January, 1882, when he gave the following history. Abdomen began to swell two years ago with neither pain nor tenderness. Was obliged to rise at night to urinate. As abdominal swelling increased and the previously regular bowels became constipated; occasionally sharp, shooting pains were felt across the chest when lifting weights, or working hard, and also slight dull pains over liver, lasting for a few moments only. When seen, abdomen measured 50 inches. On 19th of January, he was tapped, 19 quarts of fluid being removed, rendering plain a much enlarged liver, covered with smooth nodular elevations, with the apex heat of the heart displaced upwards into fourth interspace. March 18th, five gallons more fluid were removed, after which pleural and bronchial complications arose, which soon subsided. May 6th, paracentesis by capillary needle was resorted to, which was followed by much localized tenderness around the site of the puncture, and peritonitis set in, which terminated life the same evening. During life the diagnosis was most difficult and interesting, the enormous size of the liver, the palpable bossellation of its surface, giving a sensation like that of crepitating tissue, as though fluid lymph had been thrown out, and finally his abstemious habits, with absence of either syphilitic or malarial taint, suggested malignant disease. His age, the excessive rarity of primary carcinoma, or sarcoma of the liver, with his family history all negatived this view. He had had some dyspepsia; enlargement of the liver connected with catarrh of bile-ducts, would have presented symptoms of jaundice and intermitting temperature, terminating by death from cholesteremia. The case then was one of simple cirrhosis.

Sectio cadaveris: The abdomen contained six gallons of purulent fluid. Both the parietal and visceral peritoneum were covered with a thick coating of inflammatory lymph tinged with blood, from multiple capillary hemorrhages. The abdominal veins were all replete with blood. The liver weighed nearly 5½ pounds, was of a nutmeg appearance, on section was indurated, and presented a bossellated nodular appear-

ance. The gall-bladder was thickened and contracted about two-thirds in bulk. Bile-ducts were normal, the spleen was covered by a pseudo-cartilaginous capsule, but was otherwise normal, as were also the stomach, pancreas, intestines, kidneys, and supra-renal bodies. The abdominal lymphatic glands were slightly enlarged.

DR. SEILER remarked that, having seen the case during life, it was almost impossible to divest one's self of the idea of malignant disease. He thought that the projections were unaltered portions of the liver, which had been compressed and squeezed out by the contracting interstitial tissue.

Dr. Bruen remarked upon the obscurity of the etiology.

DR. TYSON asked Dr. Formad, who had examined the specimen microscopically, whether he considered it to be in the first or second stage of the affection.

DR. FORMAD replied that he considered it to be in the commencing second stage, and detailed the microscopical appearances.

DR. TYSON, after briefly adverting to the causation of cirrhosis, said that his reason for asking Dr. Formad whether he considered that the organ was in the first or second stage of cirrhosis was, that some few years since an important insurance case had been argued in our courts where the defence was set up that the man had not a cirrhosed liver because it was enlarged. For his part he had no doubt that a liver could be in the second stage of cirrhosis and yet be enlarged; there might be enlargement from fatty infiltration concurrent with interstitial inflammation.

CORRESPONDENCE.

THE NON-IDENTITY OF CROUP AND DIPHTHERIA.

To the Editor of THE MEDICAL NEWS.

SIR: In your issue of October 21, there appeared a lecture delivered by Dr. Morell Mackenzie, of London, at Bellevue Hospital Medical College, on "Diphtheria." In that lecture the learned Doctor pronounced croup and diphtheria one and the same disease. This is an utterance *ex cathedra*, and deserves more than passing notice.

I do not think that the *ipse dixit* of this distinguished authority is sufficient to establish his doctrine of identity in regard to those hitherto considered separate diseases. But he goes farther, and states: "I believe though, after all, it is a mere theoretical question." I think it is very much more, not as far as the medical treatment is concerned, but it is of very great importance in regard to the question of contagiousness.

Diphtheria has been regarded as a most contagious disease. Croup has not been so regarded. In the one case it has been the rule to isolate the patient, quarantine the family, and exclude the other children, if there any, from the public schools for a certain specified time. In the other case there has been no isolating, no quarantining, or limitation of personal freedom. If these diseases are identical, why this exhibition of inconsistency, why this wanton trifling with human life in the neglect of proper precautionary measures? If the members of the medical profession are to be regarded as the guardians of the public health, this question of the identity or non-identity of these diseases is of much more importance than a merely "theoretical question."

During an active practice of twenty years I have had quite a number of cases of membranous croup under my care. During ten of these years there has not been one case of diphtheria in the district, yet during these years an occasional case of true croup would appear, and in none of them was any attempt ever made to prevent the spread of the disease. Yet no second case ever occurred in the same family, nor were any other members of the household afflicted with sore throat of any kind near the time when the cases of croup arose.

In some of the cases that proved fatal, there were quite a number of other little children in the same family. These had constant access to the bed of the suffering one, and after death for two or three days, while the body remained in the house, these little ones would hover around where it was lying, and many fond kisses were showered on the loved form, and yet I have never had a second case in the same family. On the other hand, I have had cases of diphtheria when every effort was put forth to prevent the spread of the disease, and while I might now and again succeed, yet in the large majority of cases the disease would spread in the face of all that I could do.

Now with facts such as these before me, and my experience does not differ from that of many others, is it any wonder that without something more than mere assertion I should still very respectfully maintain that croup and diphtheria are *two* and distinct diseases, the one a highly contagious disease, the other not in the slightest degree contagious.

In order to save the profession from well-merited reproach on account of so much diversity of opinion on this subject cannot a Medical Commission be appointed to deal with this matter and to arrive at some definite finding?

I remain, yours respectfully,

A. D. MACGILLVARY, M.D.

SYDNEY, C. B., NOV. 1, 1882.

PULVERIZED BORACIC ACID.

To the Editor of THE MEDICAL NEWS.

SIR: Boracic acid has of late come into such repute as a topical dressing in the treatment of otorrhœa and kindred catarrhal affections, and as the best results follow its use in a pulverulent state, it may not be amiss to state a method by which it may be reduced to a powder.

A few moments' trituration of a small quantity of the acid will prove to the most experienced the futility of the present method.

When our attention was first directed to the subject, we adopted the plan of heating the acid in an evaporating dish, stirring continually, until it assumed a granular state, or in other words became partially decomposed into boric oxide by loss of water. If at this time a small quantity of water was added, and the mass allowed to stand for an hour or more, the partially decomposed acid resumed its original state, but when dry in an impalpable powder. The method, however, was expensive, as a notable per cent. of the acid was lost by volatilization.

Further experiment showed that trituration while moistened with water was all that was needed to reduce it to a pulverized condition, although not as fine a preparation as that by the former method. The operation is facilitated by removing from time to time the finer portion by means of a bolting cloth—the face cloth on Mead's adhesive plaster answers nicely. The use of aromatized water adds to the elegance of the preparation. I am, sir, yours, etc.,

GRANVILLE FAUGHT.

142 N. FIFTEENTH ST. PHILADELPHIA.

NEWS ITEMS.

CHARLESTON.

(From our Special Correspondent.)

DENGUE OR BREAKBONE FEVER is again present in this city. It began to be recognized by the physicians here about six or eight weeks since. It has prevailed pretty generally, and we will look with interest to see what influence ice has upon it. Dr. Thomas, of Savannah, in a contribution on "The Dengue of 1881," to the *Transactions of the Public Health Association* (vol. vi.), contends that frost and ice did not destroy the disease in Savannah. Our observations here are to the effect that no greater proportion of cases occur after the advent of frost than we find after the similar prevalence of an epidemic of yellow fever.

The present epidemic of dengue is comparatively mild, though pretty generally diffused. There is the characteristic and marked features of pain and fever. The latter often continues for from two to six days, accompanied often by eruptions and headache. It is often ushered in by an ague or by chilly sensations, and very seldom, as far as our experience extends, by the presence of swelling of the joints, by boils, or, in the case of females, by miscarriages or hemorrhages.

We think that a malarial element seems clearly marked in most cases—there being regular intermissions—the fever appearing and disappearing from time to time. There are no catarrhal symptoms or other signs of influenza. The prostration is not nearly so great as in previous epidemics. This city has been otherwise remarkably healthy, scarlet fever and diphtheria having apparently disappeared from the bills of mortality. As respects treatment, we find that the disease readily yields to alkaline fever-mixtures, cold sponging of the head, hands, and arms, hot mustard pediluvia and quinia given during the intermissions. Opium does not seem to have been required. The pain is relieved by hot mustard baths. The following fever-mixture has been found efficacious here:

℞—Acetate of potash, ...	℥ij.
Spirits of nitrous ether, . . .	℥ij.
Liquor ammoniæ acetatis, . . .	℥j.
Muriate of ammonium, . . .	℥j.
Water, ...	℥iv.—M

S.—A teaspoonful every two or three hours, when there is fever adding one or two drops of tincture of root of aconite to each dose.

The period of incubation in dengue may be as short as three or four hours—much less than was reported in a paper in the recent issue of the volume of *Transactions of the South Carolina Medical Association*. Both Dr. Wragg and Dr. Wappold mention a few hours as the incubation period in their sketches of earlier epidemics of dengue here, published in vol. vi., 1881, of the *Charleston Medical Journal and Review*. This also agrees with our own experience of former epidemics.

MONTREAL.

(From our Special Correspondent.)

MONTREAL MEDICO-CHIRURGICAL SOCIETY.—At the annual meeting the following gentlemen were elected officers for the ensuing year:

President.—Dr. Kennedy.
Vice-Presidents.—Dr. G. Roddick; Dr. Rodgers.
Secretary.—Dr. Henderson.
Treasurer.—Dr. Molson.
Librarian.—Dr. Gurd.
Council.—Drs. F. W. Campbell, Osler, and George Ross.

THE LATE DR. A. H. DAVID.—The death, in this city, on November 5, of Dr. A. H. David, aged seventy years, removes almost the last survivor of the older generation of practitioners in Montreal. Born in this city, in 1812, he was educated at McGill College, and afterwards at the University of Edinburgh, where he graduated in 1835. Returning to Canada he practised for some years at Three Rivers, but since 1844 has been a resident of Montreal, and an active and zealous member of the profession. In 1852 he edited, with the late Dr. R. L. Macdonnell, the *Canada Medical Journal*, which was discontinued after the first year. About the same time he participated in the establishment of the St. Lawrence School of Medicine, which only held two or three sessions. In 1870 he, with others, established the Medical Faculty of Bishop's College, in which he was the Professor of the Practice of Medicine, and was the Dean almost from the inception of the school. He was the General Secretary of the Canada Medical Association from its foundation until last year, when serious illness compelled him to retire. Dr. David was President of the Natural History College of Montreal, and Governor of the College of Physicians and Surgeons of Lower Canada, and was Corresponding Member of the Literary and Historical Society of Quebec, Extraordinary Member of the Royal Medical Society of Edinburgh, Corresponding Member of the Gynecological Society of Boston, Member of the British Association for the Advancement of Science, and Member of the American association for the same. For more than two years he suffered with cancer of the rectum, and bore his painful illness with remarkable fortitude and resignation.

PROGRESS OF THE YELLOW FEVER.—The following reports of cases at *Brownsville, Texas*, for the period ending *November 6, 1882*, have been received by the United States Marine-Hospital Service:

	Cases.	Deaths.
Week ending Nov. 4, 1882, . .	23	0
November 5 and 6, 1882, . . .	4	1
Total number since first appearance,	2004	115

One case at Point Isabel, November 4.
Seven deaths at Camargo, Mexico, November 3.
Eleven deaths at Mier, Mexico, November 2 and 3.

Pensacola.—The sudden decrease in the number of cases reported from Pensacola during the course of this week evidently indicates an interference with the spread of the infection by meteorological or other incongenial influences rather than the exhaustion of the susceptible material among the inhabitants. The daily reports to the National Board of Health have been as follows:

Dates.	Cases.	Deaths.
October 31, ...	7	4
November 1, ...	11	0
" 2, ...	7	1
" 3, ...	9	2
" 4, ...	10	2
" 5, ...	15	0
" 6, ...	6	1
	65	10
To October 30, ...	2178	175
Total reported to date, . .	2243	185

The investigation into the origin of the epidemic undertaken by the National Board of Health appears to meet with obstacles at every point. First, Major Walthall, who was expected to prosecute this inquiry, found it impossible to spare the necessary time, from more urgent duties in connection with the sick of the

city, and now Dr. Martin, U. S. N., who, after much and troublesome preliminary investigation, had just begun to feel that he was on the right track, is prostrated by the fever. He was taken sick on the 2d inst., but is progressing favorably under the care of Dr. Hargis, president of the Board of Health of the city. It is understood that Dr. Martin proposed to devote some attention to the history of certain "second attacks" which had been reported in Pensacola. Inasmuch as his own case comes under this category as well, we believe, as that of his attending physician, who has but recently recovered, he will be able to speak *ex cathedra* on this subject.

The navy yard continues free from fever by virtue of its *cordon sanitaire*, notwithstanding that it has been for so long within sight of infected localities. Dr. Owen must feel gratified not only that his seventeen hundred people have been saved from infection and its dangers but that a demonstration has been given as well of the non-indigenous nature of the disease as of the necessity for a less subtle medium of communication than is afforded by the air. But although the yard and its dependencies have been preserved from yellow fever, a febrile epidemic of another color has been rife during the past few weeks. How the infection was introduced is unknown, but since the cordon was established and all communication with the outside world cut off scarlet fever of the anginose variety has appeared, and thirty-eight cases have been reported. Many unreported cases are presumed to have occurred.

THE RICHMOND COUNTY (N. Y.) MEDICAL SOCIETY AND THE NEW YORK CODE.—The following resolutions have been adopted by the Richmond County (N. Y.) Medical Society:

Whereas, The By-Laws of the American Medical Association exclude from representation any State or local society which disregards its Code of Ethics; and

Whereas, The Richmond County Medical Society has bound its members to observe the said Code; therefore

Resolved, That the Richmond County Medical Society repudiates the action of the Medical Society of the State of New York, in adopting the second section of the recently promulgated amendment to the Code of Ethics, and that our delegate at the next session of the State Medical Society be instructed to urge the rescindment of such action, which this society regards as subversive of the dignity and true interests of scientific medicine; and in the event of a reconsideration being refused, to withdraw from the State Society.

Resolved, That a copy of this resolution authenticated by the signatures of the President and Secretary be forwarded to the Secretary of the American Medical Association, to the Secretary of the State Medical Society, and to such medical journals as the President may designate.

THE NEW YORK COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—The New York County Medical Society has elected a delegation to the New York State Medical Society which is understood to be pledged to vote to maintain the new Code.

THE RIGHTS AND DUTIES OF DELEGATES.—The *Detroit Lancet* (November, 1882) is "astonished that so wise a man as Dr. Jacobi, and such an able journal as the *Medical Record*, should recommend that delegates should pay no heed to the wishes of the county societies which shall send them to the next meeting of the New York Medical Society. The *Record* thinks that no delegate will forego his personal rights at the dictation of the society he is chosen to represent. It claims that each delegate has such a right as will permit him to violate the trust imposed in him by the society that he has engaged to represent. It is vain to say that the several societies do not fully understand the question of ethics as involved in the action taken last winter. When thus understanding it and when they select a delegate who accepts the position, they can expect nothing but that their wishes will be carried out by their delegate's voice and votes in the convention. The advice of the eminent gentlemen to the New York county delegates seems to us in the highest degree dishonorable. Evidently they do not think that the county medical societies of New York are giving their delegates proper instructions, since almost all thus far heard from have very positively signified their repudiation of the ethical code inaugurated at the last meeting. If the matter related to politics, the natural inference would be that while the leaders of the New York State Society felt able to deal with individual delegates after they had manipulated them at Albany, they were impotent to manipulate the several societies that really constitute the profession of the State. But of course, among medical men, in a matter such as the one before the profession of the Empire State, bribery or bulldozing of the delegates is impossible. We still believe that no honorable man will violate the instructions of the society sending him. His course is plain. If he does not think the wishes of his society are such as he can honestly endorse, he will at once resign his appointment, in order that the society may appoint such a one as will execute their will. In this manner all have perfect freedom to act, and speak, and think, and vote, as seem to them wise. The question in all possible relations has been discussed. What now remains is the voting. Let this be done fairly by all the county societies and we shall know the status of the medical profession of New York."

NATIONAL BOARD OF HEALTH.—The President has appointed George E. Waring, Esq., of Newport, R. I., a member of the National Board of Health, in place of Dr. Charles F. Folsom, of Mass., resigned.

MEDICAL POLYCLINIC OF THE NORTHEASTERN DISPENSARY, NEW YORK.—Arrangements have been made by which the Northeastern Dispensary of New York has been thrown open for the benefit of medical students and physicians; clinical instructions will be given to classes in gynecology, eye, ear, and throat diseases, skin diseases, nervous diseases, and diseases of the heart and lungs.

TRAINED NURSES.—The first annual commencement of the Brooklyn Training School for Nurses was held October 2d, in the City Hospital.

Mayor Low presided, in behalf of the president of the Board of Managers, Mrs. Seth Low, and after making a brief speech, in which he alluded to the success of the school, presented the diplomas to four graduates.

Dr. Joseph C. Hutchinson, who represented the City Hospital, delivered the address to the graduating class. He was followed by Dr. Benjamin F. Westbrook, who said that the ambulance surgeon reported that nearly all the victims of accidents or injuries coming under his observation had expressed their desire to be taken to the hospital where there were lady nurses. This the speaker considered a high tribute to the assiduity, watchfulness, and fidelity of the ladies who had graduated, and the best testimonial of the value and importance of a school which should furnish a proper system of education in training noble women in the duties of ministering to the invalid and afflicted.

At the close of the exercises in the hospital proper,

an adjournment was taken to the Nurses' Home, formerly the Orthopedic Dispensary, which was opened to the public for the first time. The building has been thoroughly reconstructed in the interior, and comfortable rooms have been fitted up for the thirty-one young ladies who now constitute the class of students.

DR. LUSK'S MIDWIFERY.—The *Medical Times and Gazette* for October 21, 1882, carefully reviewing Lusk's *Midwifery*, concludes, as follows:

"We thank Dr. Lusk for his most valuable work, which is, in our opinion, as we have said before, the best representative of the state of obstetric science and art at the present day that exists in the English language."

GRANT TO M. PASTEUR.—The French minister of agriculture has placed 50,000 francs at the disposal of M. Pasteur to enable him to continue his investigations on the contagious diseases of animals.

THE WARREN TRIENNIAL PRIZE.—The Warren Prize Committee offer a premium of $400 for the best dissertation worthy of a prize, upon the following subject:

"CHRONIC BRIGHT'S DISEASE (parenchymatous and interstitial nephritis). The nature and mutual relations of the derangements in the circulatory and secretory organs."

Dissertations should be forwarded to the resident physician, Massachusetts General Hospital, Boston, on or before February 1, 1883.

WESTERN MEDICAL CLASSES.—The Rush Medical College of Chicago, is said to have opened this term with a class of 470; the Chicago Medical College with 150, and the new College of Physicians and Surgeons of Chicago with over 100.

MEMORIAL TO THE LATE PROF. BALFOUR.—A meeting has been called in Cambridge to take steps as to the establishment of some memorial to the late Prof. F. M. Balfour. The vice-chancellor of the university announces that the family of Prof. Balfour has presented his scientific library to the university for the use of the Morphological Laboratory.

BALTIMORE EYE, EAR AND THROAT CHARITY HOSPITAL.—This institution is now open for the reception of patients. The attending medical staff is composed of specialists in the different branches indicated in the title, and the design of the institution is to furnish skilful medical and surgical treatment, and, where necessary, hospital accommodation for the indigent poor suffering from eye, ear, and throat diseases.

Connected with, and forming an important feature of, the hospital, is an *out-door department, or dispensary*, which is under the charge of the hospital medical staff. Clinical instruction and demonstration of cases will be given daily by the members of the medical staff.

RESIGNATION OF DR. O. W. HOLMES.—Though it has been for some time asserted that Dr. Oliver Wendell Holmes contemplated resigning the Chair of Anatomy in the Harvard Medical School, no definite announcement of the fact was made to the public until last week. At the request of the officers of the board of government, the resignation will be permitted to remain in abeyance until satisfactory arrangements can be made for permanently filling the vacancy, and for the present the Doctor will continue with his lectures to the first class of the school, which is the only one that comes under his department of instruction. His retirement is not enforced by ill-health or the inaptitude sometimes incident to increasing years, but is induced by his desire to give attention hereafter more particularly to literary pursuits. This decision on his part, while reluctantly consented to by the college authorities, will doubtless be viewed with complacency, to say the least, by the general public, who will argue that, while the technics of anatomy may be taught by another, there can be but one Dr. Holmes in literature. That his professional career has been one of great ability and usefulness, its continuance through a period of thirty-eight years proves. When Dr. Holmes was appointed to the office in 1847, it was known as the Parkman Professorship of Anatomy and Physiology. This title was retained until a date early in the administration of President Eliot, when the system of instruction here, as in some other departments, was expanded, and two professorships, one of anatomy and one of physiology, were established. For the former, Dr. Holmes was retained. Dr. Holmes's instructions have generally been given in the form of extemporaneous lectures, illustrated by anatomical preparations, models, pictures, and diagrams. In exceptional cases written lectures have been prepared. His professional literary labors have not been limited to these discourses, however, but have been productive of numerous contributions to the medical journals, occasional addresses before assemblies of medical men and a few published volumes. A nearly or quite complete list of these is, "Boylston Prize Dissertations," "Currents and Counter-currents," "Border-lines of Knowledge in Medical Science," and "Mechanism in Thought and Morals." The list of non-professional volumes which have been prepared, or which, at least, have served so well, as mental tonics, stimulants, and alteratives for the many who have eagerly purchased them, can be recited by anybody: The "Autocrat," the "Professor" and the "Poet at the Breakfast Table," "Elsie Venner," "The Guardian Angel," "Essays from the Atlantic Monthly," and one or two volumes of poems. As a labor of love, a memoir of John Lothrop Motley has been prepared and published in a handsomely bound and printed volume. In laying aside the gown of the professor, Dr. Holmes gains a well-earned exemption from hard work, and all will join in the wish that the pleasures of his literary "vacation," now about to begin, may be many and long-continued.

THE COMPLAINT AGAINST THE NEW YORK CREAM OF TARTAR WORKS DISMISSED.—Health Commissioner Raymond, of Brooklyn, has dismissed the complaint against the New York Cream of Tartar Works on Kent Avenue. In his decision he says: Whether the odors complained of constitute a nuisance in the eye of the law is a question which has not been and cannot be submitted to any decision of mine. The question is solely whether the health of so large a number of persons has been affected as to warrant a declaration that the public health is endangered, for to this the law confines the Board of Health, acting under the section already quoted. That this claim is not substantiated by the evidence there is, I think, no doubt, and that such danger is not likely to follow in the future, appears from the testimony, some of which I quote. Professor Henry Morton testified that the material used has no unhealthful properties, and that there is nothing in the process which is unhealthy; that no poisonous acids or unhealthy vapors get into the air; that there are no vapors which escape in the process which do not first escape into the building where the employés are at work, and thence into the air. Professor S. G. Armor testified that he examined these employés, and pronounced them healthy-looking men. Nor does it appear in the testimony that there has been any sickness

among the factory hands attributable to the vapors complained of. Dr. Joseph C. Hutchison testified that the odors and vapors which escape from the factory are neither poisonous nor unhealthful, and that some of them would have quite the opposite effect upon the atmosphere, and tend to purify rather than otherwise. The testimony of Dr. S. Fleet Speir is to the same effect in regard to the absence of detriment or danger to health from these vapors and odors. After a full and careful consideration of all the testimony in the case, I am compelled to decide that the business complained of is not detrimental or dangerous to the public health, within the meaning of the statute.

THE OFFICE OF ASSISTANT SURGEON-GENERAL.—The Attorney-General has just submitted an opinion to the Secretary of War to the effect that a vacancy in the office of Assistant Surgeon-General can be filled by the appointment of any surgeon with the rank of colonel, or it may be filled by appointing thereto the senior officer in the medical corps having the rank of lieutenant-colonel, which is the next grade below. The latter officer is, by the rules of promotion in the military service, entitled to the vacancy existing in the grade to which the office of Assistant Surgeon-General belongs.

BEQUESTS TO MEDICAL CHARITIES.—The late Jerome G. Kidder, Esq., of Boston, has bequeathed $50,000 to the Boston Lying-in Hospital, and $25,000 to the Massachusetts General Hospital.

MR. FRANCIS SEYMOUR HADEN, of London, and member of the Royal College of Surgeons of England, has just arrived in this country. In addition to his surgical attainments, Mr. Haden is an etcher of considerable reputation, and comes to this country to lecture in the principal cities on art subjects.

HOLY WATER.—The *Chemical Review* states that recent analysis of the water from the Holy Well at Mecca, which is so eagerly drunk by pilgrims, shows this water to be sewage, about ten times stronger than average London sewage.—*Lancet*, October 21, 1882.

ISOLATION OF CASES OF CONTAGIOUS DISEASE IN SCHOOL CHILDREN.—The French Minister of Public Instruction has addressed a circular to the editors of the French Medical Journals asking their assistance in urging the universal adoption of the rules drawn up by the committee of the Académie de Médecine as to the time children should be kept from school after exposure to contagious disease; these rules have been already published in THE NEWS for August 12th.

THE NEW OBSTETRICAL INSTITUTE OF VIENNA, already mentioned in our columns, will open at the end of this month instead of on Sept. 1st, as previously announced.

SAMARITAN SCHOOLS.—Professor Esmarch, the well-known surgeon of Kiel, recognizing the advantages of immediate attendance in cases of accidents, has instituted a number of schools in that city which are called Samaritan schools. They are composed of youth of both sexes, who are so instructed that in case of accidents they can render every assistance necessary until the arrival of the physician. Professor Esmarch has written a small work upon the subject, in which he explains the various means to be employed under such circumstances. The scholars are instructed upon the formation of the bones and action of medicines in a few hours. In consequence of the success which has attended these schools, the Professor has visited Berlin for the purpose of introducing the system there. Eight schools, of 40 students each, have been established in that city. Many of the most prominent physicians lecture and give demonstrations upon the structure of the human body. An important feature of this innovation is the enrollment of a portion of the police force among the scholars. It may be supposed that a policeman thus trained will be able to distinguished between cases of illness and intoxication, and not take victims of the former to the lock-up, as sometimes has happened. —*Boston Journal of Chemistry*, November, 1882.

THE EVIL EFFECTS OF BADLY MADE SHOES.—At a recent meeting of the Hygienic Congress at Geneva, COLONEL ZIEGLER, who is chief surgeon of the Federal Army, read a paper on the evil effects of badly made shoes, with special reference to hygiene and the marching powers of soldiers. Colonel Ziegler mentioned that the Swiss examining surgeons are compelled to reject every year 800 recruits—the strength of a battalion—for malformation of the feet, resulting from badly fitting shoes. The foot is in reality a bow, so elastic that at every step it contracts and expands, lengthens and shortens, and a line drawn through the centre of the great toe intersects the heel. But shoemakers, who are generally utterly ignorant of the anatomy of the foot, do not give room enough for the lateral extension of the great toe. They crib, cabin, and confine it until it is forced against the other toes. Hence arise frequent inflammations of the great toe, corns, ulcerations, and sometimes veritable articular inflammation. Another evil, which Colonel Ziegler ascribes in great measure to bad shoeing, is flat-footedness, whereby the arch is converted into a straight line, and prolonged walking and marching rendered impossible. Another cause of this defect is the habit of carrying heavy weights at an early age; but in most instances, Colonel Ziegler contends, perfect shoes would restore the foot to its normal condition. The first obstacle to a reform in the shape of shoes lies in the fact that it would involve a great expense in the shape of new lasts, an expense that shoemakers are naturally loth to incur. Fashion has also its lasts, and shoemakers consider themselves bound to conform to the prevailing mode. A test of a perfect pair of shoes is that, when placed together, they should touch only at the toes and the heels; the soles should follow the sinuosities of the feet, and to give room for their expansion should exceed them in length by fifteen to twenty millimetres.

THE TREATMENT OF HYSTERIA BY METALLO-THERAPY.—One of our indefatigable German *confrères* contributes in the *Archiv für heitere gynäkologie* the following instance of such successful treatment of this rebellious disease that we deem it worthy of notice. Marie O., a chamber-maid in the house of a Privy Councillor in Berlin, was compelled, among various other laborious duties, to light to the door the numerous guests who visited the house nearly every evening. The reporter had occasionally opportunity (she was charming, and nineteen years old) to notice how she comported herself to the visitors who attempted to call a smile to her lips by liberal "trinkgelder." This however, was no easy task: on account, probably, of some anomaly of menstruation, she was hysterical, apparently; always solemn, almost melancholy in her bearing; sometimes he even thought he saw tears in her eyes. This case of hysteria, thus clearly made out, seemed to him in every way suitable for the study of the influence of metals on the psychical state, and the reporter determined at the next evening reception to which he was invited to institute some experiment on this point. Accordingly he posted himself behind her

as the guests passed out in leaving the house: when nickel, copper, or silver in pieces of small circumference came in contact with her beautiful hand, the melancholic condition remained unaltered, became even indeed painfully exaggerated. A larger piece of silver, apparently about as large in size as a five-mark piece, seemed reflexly to call forth some transitory improvement. Suddenly, however, as a handsome young baron passed before her and with a meaning look pressed something into her outstretched hand, he believed that a complete cure had been accomplished; he looked closer—it was a gold ten-mark piece.

The above case is reported as showing the comparative value of gold and other metals in the treatment of hysteria; it would seem that, to be equally efficacious, silver must be applied in larger quantities than gold.

TOY-PISTOLS.—The report of the State Board of Health of Wisconsin for the current year gives the following information concerning this dangerous plaything: About the 4th of July last many accounts appeared in the columns of the public press of accidents occurring from the use of toy-pistols. These articles are of two or three kinds, some using a cartridge of thin tissue paper enclosing a minute quantity of fulminating powder; others making use of a composition of phosphorus and chlorate of potash similar to that sometimes employed for tipping matches; and others still have cartridges of copper, charged with nitro-glycerine, giant powder, or dynamite, tamped with clay. The first are the least objectionable; but, as a part of the cartridge consists of very fine gravel, which may be driven into the eyes by the explosion of the fulminate, they cannot be called safe playthings. The second kind, those in which the charge consists of a pellet of phosphorus and chlorate of potash are objectionable from the fact that the phosphorus is liable to cause burns which are difficult to heal, being poisoned by the acid produced during the combustion, and which leave unsightly scars. It is true that the liability to such accidents may be decreased by a very careful and exact proportioning of the ingredients of which the cartridges are composed, but a knowledge of chemistry sufficient for this is hardly to be looked for among the workmen employed by the manufacturers. The third, however, is doubtless the variety to which the accidents already referred to are due; these accidents are always very severe, and in several instances have ended fatally. Their cause is briefly this: into all explosions the element of time enters to a greater extent than is usually suspected, and on the rapidity with which combustion occurs depends very often the amount of damage done, or rather whether any mischief at all shall result. Gunpowder, which seems to explode instantaneously, is really among the slower of the explosives, and hence it may be used with a greater measure of safety than almost any other. Gun-cotton is variable in its action, and may be rendered slow or quick at pleasure; the fulminates are very rapid, while nitro-glycerine is almost uncontrolable—a property which at once gives rise to some of its most valuable applications and renders it especially dangerous in incautious or inexperienced hands.

A drop or two of nitro-glycerine placed in a thin copper shell in company with a minute portion of fulminate, and covered with clay, constitutes the cartridge furnished with the toy-pistols to which the serious accidents have been owing; this cartridge is placed in a roughly constructed barrel, usually made of cast-iron, fitted with a hammer which is forced down upon the cartridge by means of a tolerably powerful spring. The explosion frequently bursts the thin copper shell instead of driving the clay pellet out through the barrel, and fragments of the metal are driven into or through the palm of the hand, or into the large muscles on which the action of the thumb depends. Every surgeon knows that lock-jaw or tetanus is peculiarly liable to result from gun-shot wounds of the hands or feet, and many sad illustrations of the fact were given in the columns of the Wisconsin press about the time heretofore mentioned.

We learned from our correspondents that the sale of these toy-pistols was prohibited in several places, but in the large majority of our towns and cities no action was taken, and children were allowed to purchase the dangerous playthings and to run the risk of pain, mutillation and death in one of its most frightful forms for the advantage of thoughtless or unscrupulous men.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending October 28, 1882, indicate that dysentery and remittent fever have considerably decreased and that cholera morbus, rheumatism, typho-malarial fever, cholera infantum, diarrhœa and tonsillitis have decreased in area of prevalence. There was no marked increase in any of the diseases tabulated.

For the month of October, 1882, influenza, bronchitis, diarrhœa, cholera infantum, dysentery, and erysipelas seem to have been more prevalent, and remittent fever, diphtheria, intermittent fever, scarlet fever, and whooping-cough less prevalent than the average for October in the preceding five years. It will be seen that the most noticeable decrease is in the communicable diseases most to be dreaded in Michigan.

OBITUARY RECORD.—DIED, on October 13, 1882, CASIMIR JOSEPH DAVAINE in the 71st year of his age. Davaine is best known as having established the contagiousness of charbon from animal to man, and that the contagium depends upon bacteria. He also determined that the essential cause of difference between malignant pustule and other gangrenous diseases depended upon the presence of bacteria in the former disease which were capable of multiplying by inoculation.

—— Our English exchanges announce the death, in the 58th year of his age, of Mr. JOSEPH T. CLOVER, the well-known chloroformist to various London hospitals.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM OCTOBER 30 TO NOVEMBER 6, 1882.

SPENCER, W. C., *Surgeon.*—In addition to his duties at Fort Snelling, Minn., to perform the duties of attending surgeon at Department Headquarters.—*S. O. 176, Department of Dakota, October* 24, 1882.

O'REILLY, ROBERT M., *Captain and Assistant Surgeon.*—Detailed member of board of officers to assemble at Washington, D. C., to examine into and report upon qualifications of candidates for superintendents of national cemeteries.—*S. O. 254, A. G. O., October* 31, 1882.

APPEL, AARON H., *First Lieutenant and Assistant Surgeon.*—Leave of absence extended two months.—*S. O. 255, A. G. O., November* 1, 1882.

GRAY, W. W., *Assistant Surgeon.*—Granted one month leave of absence on surgeon's certificate of disability, with permission to apply for an extension of five months.—*S. O. 103, Department of the South, October* 31, 1882.

BARNETT, RICHARDS, *Assistant Surgeon.*—Granted leave of absence for one month, with permission to apply for extension of five months.—*S. O. 202, Department of the East, November* 1, 1882.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

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